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NATIONAL ENFORCEMENT INVESTIGATIONS CENTER  
P.O. BOX 25227, DENVER FEDERAL CENTER  
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February 23, 2018

MEMORANDUM

SUBJECT: Transmittal of Final Report – RCRA Compliance Investigation, PCI Synthesis –  
Newburyport, Massachusetts (VP1254)

FROM: Jacquelyn Vega *Jacquelyn Vega*  
Environmental Engineer  
NEIC Civil Services Section

TO: Mary Jane O'Donnell  
RCRA, EPCRA, Federal Programs Branch Chief  
U.S. EPA Region 1

Two reports are being issued for this inspection. One report includes material that was claimed Confidential Business Information (CBI) by the facility and will be sent by electronic copy (CD) to Linda Brolin. The second report does not include the CBI information and will be sent via e-mail to Linda Brolin and Rich Piligian. The onsite investigation was conducted June 13 through 16, 2017. Thank you for providing comments on the draft report. Your comments were considered and incorporated into the final report as appropriate. In keeping with NEIC procedures, please delete, destroy, or return all copies of the draft report upon receipt of this final report. If you have any questions, please contact me at (303) 462-9260.

Attachment

Cc: Linda Brolin, EPA Region 1  
Rich Piligian, EPA Region 1





United States Environmental Protection Agency  
Office of Enforcement and Compliance Assurance  
Office of Criminal Enforcement, Forensics and Training

National Enforcement Investigations Center

NEIC


NEICVP1254E02

**RESOURCE CONSERVATION AND RECOVERY ACT  
COMPLIANCE INVESTIGATION REPORT**  
(Report E02 – without Confidential Business Information)

**PCI Synthesis**  
9 Opportunity Way  
Newburyport, Massachusetts  
NEIC Project No.: VP1254

February 2018

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### APPENDICES (\*NEIC-created)

Appendices containing material claimed Confidential Business Information by PCI  
Synthesis (Appendices B and E) have been removed from this version of the report.

- A NEIC Photographs (64 pages)\*
- C CHEMREC Waste Profiles (5 pages)
- D Email and Job Description for Spent Carbon (2 pages)
- F Tradebe Manifest for Waste Solvents (12 pages)
- G Clean Air Act Permit (8 pages)
- H Waste Profile P110512021 (2 pages)
- I Industrial Discharge Permit (24 pages)

This Contents page shows all of the sections contained in this report  
and provides a clear indication of the end of the report.

## INTRODUCTION

At the request of U.S. Environmental Protection Agency (EPA) Region 1, the EPA National Enforcement Investigations Center (NEIC) conducted a Resource Conservation and Recovery Act (RCRA) compliance investigation of PCI Synthesis (PCI), located at 9 Opportunity Way in Newburyport, Massachusetts 01950.

This report presents NEIC's field observations during the June 13 through 16, 2017, on-site inspection of PCI. The information presented in this report was collected from personnel interviews, direct observations, company-provided documentation, and state and federal government databases. With the participation of EPA Region 1, NEIC conducted the RCRA inspection of the PCI facility with the following objectives:

- Conduct a RCRA on-site inspection of PCI, specifically focusing on the process operations, waste determinations, and recordkeeping in compliance with RCRA Subparts BB and CC. Leak detection and repair (LDAR) monitoring was conducted by Bill Osbahr from EPA Region 1, in accordance with EPA Region 1 standard operating procedures.
- Evaluate all information obtained during the investigation to determine PCI's compliance with applicable RCRA regulations, specifically with RCRA Subparts BB and CC.

## FACILITY BACKGROUND

PCI is a specialty chemical manufacturer that produces active pharmaceutical ingredients. The facility operates as a batch processing operation 5 days a week (Monday through Friday), 24 hours a day (three shifts). Approximately 60 employees were working at this facility at the time of the NEIC inspection. The facility consists of two buildings: Building 1 houses product quality laboratories (quality control [QC] Lab 1 and Lab 2), the GMP Lab (also called the Kilo Lab), offices, and the manufacturing operations; and Building 2 is a warehouse for material storage and 90-day accumulation of hazardous waste.

PCI is a RCRA large quantity generator (LQG) and is subject to the Massachusetts hazardous waste regulations. Massachusetts has an authorized RCRA program, but has not adopted RCRA Part 264/265 Subpart BB and CC regulations. Most of the regulated waste generated on-site is solvent-based and is accumulated in drums. However, seven tanks were identified as storing hazardous waste during the NEIC inspection.

Additionally, wastewater (sludge) is discharged from the scrubber system (air pollution control device for the vapors from the production equipment/area) into a tank referred to as the "Pit Tank." Hazardous waste collects in the Pit Tank before it is treated in PCI's industrial wastewater treatment facility (Grade II), where the wastewater undergoes carbon bed and neutralization treatment (in tank T-5000) before it is discharged to a publicly owned treatment works (POTW).

**ON-SITE INSPECTION SUMMARY**

NEIC conducted the on-site inspection of PCI from June 13 through 16, 2017. The inspection team included Jackie Vega (project manager) and Alison Ruhs from NEIC. Linda Brolin, Richard Piligian, and Bill Osbahr from EPA Region 1 participated in the inspection. During the opening meeting on June 13, 2017, credentials were presented to Elie Saikali, PCI's director of manufacturing, and Bill Anderson, PCI's environmental health and safety (EHS) manager.

NEIC conducted a general process review of PCI operations. During this review, NEIC examined the major operational aspects of the PCI facility, including process operations and management of hazardous wastes. NEIC's process overview, described in the next section, was based on discussions with facility personnel, records reviews (hard copy and digital), and a tour of the operational areas.

Following the process review, NEIC conducted focused inspections of various process units and operations. RCRA-regulated areas that were inspected during the NEIC investigation included:

- Warehouse central storage area
  - less-than-90-day hazardous waste accumulation area
  - universal waste storage
- QC Lab 1 – satellite accumulation areas (SAAs)
- QC Lab 2 – SAAs
- Kilo Lab (GMP Lab) – several SAAs
- Production area
  - less-than-90-day hazardous waste accumulation area
  - SAAs
  - hazardous waste tanks

Additionally, EPA Region 1 performed LDAR monitoring on equipment subject to RCRA Subparts BB and CC, with NEIC's assistance and supervision.

At the conclusion of the on-site inspection on June 16, 2017, NEIC held an exit conference with PCI personnel to discuss preliminary inspection observations. During the exit conference, NEIC advised PCI that final compliance determinations would be made by EPA Region 1. Before leaving the site, the inspection team provided PCI a complete list of all documents received on-site by NEIC, and logs and copies of all photographs taken by NEIC.

This report presents the observations and findings of the NEIC inspection. All activities of NEIC personnel were performed in accordance with the NEIC quality system. Material claimed Confidential Business Information by PCI Synthesis has been removed from this version of the report (NEICVP1254E02).

## SUMMARY OF FINDINGS

The following table summarizes the findings and observations of NEIC's on-site inspection and follow-up review of facility-provided files. Areas of noncompliance (AON) pertain to areas or issues identified by NEIC that may have potential compliance implications, but are neither inclusive nor exclusive of all such potential areas or issues. Areas of concern (AOC) are inspection observations of potential problems/activities that could impact the environment, result in future noncompliance with permit or regulatory requirements, and/or are areas associated with pollution prevention issues. EPA Region I will assess the applicability of regulatory requirements based on its review of this report and other technical, regulatory, and facility information.

AONs are designated and organized by number, while AOCs are designated and organized by letter. These are linked to specific supporting documents. Additionally, NEIC prepared documents containing photographs (Appendix A). Appendices containing material claimed Confidential Business Information by PCI Synthesis (Appendices B and E) have been removed from this version of the report.

| RESOURCE CONSERVATION AND RECOVERY ACT  |  |                     |                    |
|---|--|---------------------|--------------------|
| AREAS OF NONCOMPLIANCE  |  | Finding/Observation | Evidence Reference |
| Regulatory Citation   | FINDING:   |                     |                    |
| <p>1. Massachusetts Environment Laws and Regulations, Department of Environmental Protection, 310 Code of Massachusetts Regulations (CMR) § 30.302: Determination of Whether a Waste is Hazardous [40 CFR § 262.11] – Any person who generates a waste shall determine if that waste is a hazardous waste, as identified or otherwise described in 310 CMR 30.100, ...</p> <p>310 CMR § 30.102(2): Methods of Identification of Hazardous Wastes [40 CFR § 261.3(c)(2)(i)] – Accordingly, unless exempt pursuant to 310 CMR 30.104, a waste is a hazardous waste subject to 310 CMR 30.000 if:...</p> <p>(d) The waste is generated from the treatment, storage, disposal, or use of a hazardous waste, including any sludge, spill</p> | <p>PCI failed to make an appropriate hazardous waste determination which, resulted in the mismanagement of the following hazardous wastes:</p> <ul style="list-style-type: none"> <li>wastewater (sludge) discharged from the building scrubber system and into the Pit Tank</li> <li>wastewater from trenches on the production floor that are discharged into the Pit Tank</li> <li>spent carbon material from wastewater treatment</li> </ul> <p>NOTES:</p> <p>PCI generated wastewater (sludge), which discharges from the scrubber system into the Pit Tank prior to treatment in carbon beds. Additionally, wastewater from the trenches on the production floor discharges into the Pit Tank. The trenches collect spills and wash water that result from cleaning the outside of the equipment and the floor. PCI was managing the</p> |                     |                    |
|   | <p>Appendix C – CHEMREC Waste Profiles</p> <p>Appendix A – NEIC Photographs</p>  |                     |                    |

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AREAS OF NONCOMPLIANCE

| Regulatory Citation                                      | Finding/Observation  | Evidence Reference |
|--|--|--------------------|
| <i>residue, ash emission control dust, and leachate.</i> | Pit Tank as an exempt wastewater treatment unit and the spent carbon as a non-hazardous waste.   |                    |
|  | <p>The scrubber system receives vapors that result from cleaning the reactors, which contain solvents and caustics (caustics are neutralized in the scrubber system). Some of the solvents used in cleaning would qualify as RCRA F-listed hazardous waste once spent, and the F-listing (for non-ICR-only listed waste, not listed solely for the characteristic of ignitability, corrosivity, and/or reactivity) would carry through to the wastewater (sludge) from the scrubber system. The wastewater from the scrubber system meets the RCRA definition of a "sludge":</p> <p><b>310 CMR § 30.010 [40 CFR § 260.10] – Sludge means any solid, semi-solid, or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility...</b></p> |                    |
|  | <p>The profiles used for the spent solvents when they are shipped to CHEMREC as hazardous wastes are included in <b>Appendix C</b>. In the profiles, the waste solvents have listed waste classifications, which include the listed hazardous waste numbers F002, F003, and F005. Hazardous waste No. F003 would be ignitable-only, but the batches which use dichloromethane (F002) or toluene (F005) would contain listed wastes that would carry through to the scrubber water.</p>   |                    |
|  | <p>The two carbon beds treat the wastewater collected in the Pit Tank. From the carbon beds, the wastewater is discharged to tank T-5000, which then discharges to the City of Newburyport sewer system. The flow rate through the carbon beds is monitored to determine when it is time to change out the spent carbon, typically every 6 to 9 months. According to Bill Anderson, PCI's EHS manager, no hazardous waste determination has been made on the spent carbon material. The spent carbon includes any hazardous waste listings that are carried through from the Pit Tank, including, but not limited to, hazardous waste Nos. F002 and F005.</p>  |                    |

## RESOURCE CONSERVATION AND RECOVERY ACT

## AREAS OF NONCOMPLIANCE

|    | Regulatory Citation  | Finding/Observation   | Evidence Reference   |
|----|--|---|--|
| 2. | 310 CMR § 30.311(1): General Requirements [40 CFR § 262.20(a)(1)] – <i>A generator who transports, or offers for transportation, hazardous waste for off-site treatment, storage, disposal or use, must prepare a manifest ...</i> | <p><b>FINDING:</b></p> <p>PCI failed to prepare a manifest for shipment of spent carbon material, which is a listed hazardous waste.</p> <p><b>NOTES:</b></p> <p>PCI uses two carbon absorption beds to pretreat wastewaters that collect in the Pit Tank before discharging to the City of Newburyport sewer system. The spent carbon contains listed hazardous wastes, as discussed in Finding No. 1. The spent carbon is managed by Carbon Filtration Systems, Inc. as non-hazardous, and it is sent for re-activation at Carbon Activated Corporation in New York. An email describing carbon management activities and a job description for the spent carbon change-out is included in <b>Appendix D</b>. The email from Carbon Filtration Systems, Inc. states, "...the subsequent regeneration process typically results in the destruction of the petroleum compounds and VOC's by a prevalent industrial practice termed "high-temperature reactivation" and is usually performed in multiple hearth furnaces or rotary kilns."</p> <p>Federal regulations define a carbon regeneration unit as a thermal treatment device. On February 21, 1991, a final rule was promulgated defining "carbon regeneration unit" as a thermal treatment device (56 Federal Register [FR] 7200). According to 56 FR 7200, carbon regeneration units are not exempt reclamation units, and the waste contaminants are being destroyed in the regeneration process. Thermal treatment units require a RCRA permit. Therefore, spent carbon destined for reclamation and treatment in a thermal treatment unit does not meet the exemption from solid waste under 40 § CFR 261.2(c)(3). Reclaiming the carbon is treatment of a hazardous waste.</p> <p><b>FINDING:</b></p> | <b>Appendix D</b> – Email and Job Description for Spent Carbon |
| 3. | 310 CMR § 30.801: Who Must Have a License [40 CFR § 270.1(c)] – <i>No person shall transport, use, collect, store, treat, or dispose of hazardous waste or construct...</i>  | <p><b>FINDING:</b></p>  | <b>Appendix A</b> – NEIC Photographs                           |

## RESOURCE CONSERVATION AND RECOVERY ACT

## AREAS OF NONCOMPLIANCE

| Regulatory Citation   | Finding/Observation  | Evidence Reference |
|---|--|--------------------|
| <p><i>operate or maintain any facility for the use, storage, treatment, or disposal of hazardous waste, unless said person has applied for and obtained, and has in effect, a valid license issued by the Department pursuant to M.G.L. c. 21C and 310 CMR 30.000, except that a license is not required for the following:</i></p> <p><i>(1) The accumulation of hazardous waste at the site of generation by the generator thereof for up to and including 90 days, as provided in 310 CMR 30.340.</i></p> <p><b>310 CMR § 30.685: Management of Containers [40 CFR § 265.173] --(1) A container holding hazardous waste shall always be closed during storage, except when waste is being added or removed.</b></p> <p><b>310 CMR § 30.341: General Accumulation Standards for Large Quantity Generators [40 CFR § 262.34(a)(2)]—...(2) Each tank or container in which hazardous waste is being accumulated shall be clearly marked and labelled throughout the period of accumulation. Marks and labels shall be clearly visible for inspection... Each tank or container shall be marked and labeled with the following: ... (d) The date upon which each period of accumulation begins.</b></p> <p><b>310 CMR § 30.688: Special Requirements for Ignitable, Reactive, and Incompatible Hazardous Wastes [40 CFR § 265.177(c)]</b></p> <p><b>...(4) A container holding a hazardous waste that is incompatible with any waste or other material stored nearby in other containers or in piles, open tanks or surface impoundments shall be separated from the</b></p> | <p>PCI stored hazardous waste in containers without a RCRA permit.</p> <p><b>NOTES:</b></p> <ul style="list-style-type: none"> <li>Satellite accumulation containers for all the HPLCs in QC Lab 2 were not closed as required by 310 CMR § 30.685(1) as referenced by § 30.342 (1)(c) [40 CFR § 265.173 (as referenced by 40 CFR § 262.34(a)(1)(i))]. (<b>Appendix A – Photograph Nos. IMGP0058 and IMGP0059</b>)</li> <li>Six hazardous waste containers (four 55-gallon drums and two 5-gallon pails) were not marked with the accumulation start date as required by the less-than-90-day accumulation exemption, 310 CMR § 30.341(2)(d) [40 CFR § 262.34(a)(2)]. PCI personnel properly labeled the containers with the accumulation date during the NEIC inspection. (<b>Appendix A – Photograph Nos. IMGP0031 – IMGP0040 and IMGP0055</b>)</li> <li>PCI accumulates incompatible wastes, including acids, bases, flammable, and reactive chemicals, near each other in the same less-than-90-day accumulation area without protection through means of a dike, berm, wall, or other device, which is required by 310 CMR § 30.688(4), as referenced by 310 CMR 30.342(1)(f) [40 CFR § 265.177(c) (as referenced by 40 CFR § 262.34(a)(1)(i))]. (<b>Appendix A – Photograph Nos. IMGP0049 – IMGP0054</b>). Prior to shipment off-site, all of the hazardous waste containers are stored in the same area with one central sump.</li> </ul> <p>The container accumulation areas could qualify for the less-than-90-day hazardous waste accumulation exemption from permitting if the containers were managed according to the exemption requirements listed in 310 CMR § 30.340(4) [40 CFR § 262.34].</p> |                    |

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| AREAS OF NONCOMPLIANCE |   |   |  |
|------------------------|---|---|--|
|                        | Regulatory Citation   | Finding/Observation   | Evidence Reference   |
|                        | other waste or other material or protected from it by means of a dike, berm, wall, or other device.   |   |  |
| 4.                     | <p><b>310 CMR § 30.801: Who Must Have a License [40 CFR § 270.1(c)]</b> – No person shall transport, use, collect, store, treat, or dispose of hazardous waste or construct, operate or maintain any facility for the use, storage, treatment, or disposal of hazardous waste, unless said person has applied for and obtained, and has in effect, a valid license issued by the Department pursuant to M.G.L. c. 21C and 310 CMR 30.000, except that a license is not required for the following:</p> <p>(1) The accumulation of hazardous waste at the site of generation by the generator thereof for up to and including 90 days, as provided in 310 CMR 30.340.</p> <p><b>310 CMR § 30.696: Inspections</b>— (1) The owner or operator shall inspect... (c) The construction materials and the area immediately surrounding the externally accessible portion of the tank system, including the secondary containment system (e.g., dikes), at least once daily, to detect erosion or signs of releases of hazardous waste (e.g., wet spots, dead vegetation).</p> <p><b>310 CMR § 30.341: General Accumulation Standards for Large Quantity Generators [40 CFR § 262.34(a)(2)]</b>—... (2) Each tank or container in which hazardous waste is being accumulated shall be clearly marked and labelled throughout the period of accumulation. Marks and labels shall be clearly visible for inspection... Each tank or container shall be marked and labeled with</p> | <p><b>FINDING:</b></p> <p>Seven tanks were identified as storing hazardous waste without a RCRA permit.</p> <p><b>NOTES:</b></p> <p>PCI has six "catch pots," also referred to as knock-out pots (KOPs), that are associated with air pollution control vacuum system condensers used during product drying activities. Concentrated RCRA F-listed spent solvents are collected in these KOPs. According to Bill Anderson, PCI EHS Manager, the profile number for the waste from HW-101 is P110512021. Manifests used for shipping the waste to Tradebe Treatment and Recycling LLC list hazardous waste Nos. D001, D002, F002, and F005 (<b>Appendix F</b>). The following seven hazardous waste tanks were not being managed as hazardous waste tanks:</p> <ul style="list-style-type: none"> <li>• Six KOPs</li> <li>• One hazardous waste collection tank (HW-101)</li> </ul> <p>Solvents that are used for cleaning include methanol, acetone, dichloromethane, and toluene. The profiles used for the spent solvents when they are shipped to CHEMREC are included in <b>Appendix C</b>. The profiles list waste classifications for the waste solvents; these include hazardous waste Nos. F002, F003, and F005. PCI empties all KOPs and the HW-101 tank frequently into less-than-90-day hazardous waste accumulation containers.</p> <p>These units could qualify for the less-than-90-day hazardous waste accumulation exemption from permitting if the tanks were being managed according to the exemption requirements listed in 310 CMR § 30.340(4) [40 CFR § 262.34]. None of these tanks were being managed in accordance with 310 CMR §</p> | <p><b>Appendix A</b> – NEIC Photographs</p> <p><b>Appendix F</b> – Tradebe Manifest for Waste Solvents</p> <p><b>Appendix C</b> – CHEMREC Waste Profiles</p> |

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| Regulatory Citation   | Finding/Observation   | Evidence Reference   |
| the following: (a) The words "Hazardous Waste" ...  | <p>30.343 [40 CFR § 262.34]. For example, the following exemption requirements were not met:</p> <ul style="list-style-type: none"> <li>The tank requirements of 310 CMR § 30.343, which references, among other provisions, 310 CMR § 30.696; Inspections [Subpart J of 40 CFR § 265], or Subparts AA, BB, and CC of 40 CFR § 265 (40 CFR § 262.34(a)(1)(ii)).</li> <li>The tanks were not marked with the words "hazardous waste" – 310 CMR § 30.341(2) [40 CFR § 262.34(a)(3)].</li> </ul> <p>NEIC photographed these tanks during the inspection on June 13, 2017 (Appendix A – Photograph Nos. IMG0011 – IMG0015 and IMG0019 – IMG0029) showing the absence of required labeling. Bill Anderson, (PCI's EHS manager), Elie Saikali (PCI's director of manufacturing), and Glenn Murphy (PCI's production manager) stated that there were no hazardous waste tanks on-site; therefore, PCI was not aware that these six tanks needed to be managed as hazardous waste units. For this reason, none of these tanks met the requirements of 310 CMR § 30.343 [40 CFR § 265 Subpart J].</p> <p><b>FINDING:</b></p> <p>PCI has auxiliary equipment that comes into contact with hazardous wastes with an organic concentration of at least 10 percent by weight that was not identified in its operating record, nor was the equipment being managed in accordance with the volatile air emission requirements outlined in 40 CFR § 265 Subpart BB.</p> <p><b>NOTES:</b></p> <p>Auxiliary equipment that could be regulated under 40 CFR § 265 Subpart BB include: pumps, compressors, pressure-relief devices, sampling connection systems, valves, open-ended valves and lines, and closed-vent systems and control devices. PCI did not identify any of its auxiliary equipment that could</p> | <p>Appendix C –<br/>CHEMREC Waste<br/>Profiles</p> <p>Appendix A – NEIC<br/>Photographs</p> <p>Appendix G – Clean<br/>Air Act Permit</p> |
| <p><b>5. 40 CFR § 265.1050(a)</b> – The regulations in this subpart apply to owners and operators of facilities that treat, store, or dispose of hazardous wastes ...</p> <p><b>40 CFR § 265.1050(e)</b> – Equipment that contains or contacts hazardous waste with an organic concentration of at least 10 percent by weight for less than 300 hours per calendar year is excluded from the requirements of 265.1052 through 265.1060 of this subpart if it is identified, as required in 265.1064(g)(6) of this subpart.</p> <p><b>40 CFR § 265.1064(g)</b> – The following information pertaining to all equipment</p> |   |  |

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| Regulatory Citation  | Finding/Observation  | Evidence Reference |
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| <p>subject to the requirements §§ 265.1052 through 265.1060 shall be recorded in a log that is kept in the facility operating record:</p> <p>... (6) Identification, either by list or location (area or group) of equipment that contains or contacts hazardous waste with an organic concentration of at least 10 percent by weight for less than 300 hours per calendar year.</p> <p><b>40 CFR § 265.1060(a) – Owners and operators of closed-vent systems and control devices subject to this subpart shall comply with the provisions of § 265.1033 of this part.</b></p>   | <p>potentially be regulated under 40 CFR § 265 Subpart BB. PCI uses concentrated solvents extensively in its production processes and cleaning operations. Specifically, the auxiliary equipment associated with seven hazardous waste tanks, as well as portable vacuum pumps that are used during vessel cleanout operations, come into contact with hazardous wastes with an organic concentration of at least 10 percent by weight. Solvents that are used for cleaning include methanol, acetone, dichloromethane, and toluene. The profiles used for the spent solvents when they are shipped to CHEMREC are included in <b>Appendix C</b> and show the waste solvent streams are greater than 90 percent solvent.</p>   |                    |
| <p><b>40 CFR § 265.1033 Standards: Closed-vent systems and control devices.</b> (f) <i>The owner or operator shall monitor and inspect each control device required to comply with this section to ensure proper operation and maintenance of the control device by implementing the following requirements:...</i></p> <p>(2) <i>Install, calibrate, maintain, and operate according to the manufacturer's specifications a device to continuously monitor control device operation as specified below: ... (vi) For a condenser, either: (A) A monitoring device equipped with a continuous recorder to measure the concentration level of the organic compounds in the exhaust vent stream from the condenser; or (B) A temperature monitoring device equipped with a continuous recorder. The device shall be capable of monitoring temperature with an accuracy of ±1 percent of the temperature being monitored in degrees Celsius</i></p> | <p>During the NEIC inspection of PCI on June 14, 2017, Bill Osbahr, EPA Region 1, used a toxic vapor analyzer (TVA) to monitor a portable pump used for tank cleanout operations; the monitoring showed the pump had detectible volatile organic compound (VOC) emissions greater than 10,000 parts per million (ppm). This portable pump had not been in use for several days, according to Glenn Murphy (PCI production manager), indicating that these portable pump systems still contain volatile organic compounds even when not in use (<b>Appendix A – Photograph No. IMGP0046</b>).</p> <p>Additionally, the facility has condenser systems that are used exclusively as control devices for air emissions (<b>Appendix G – Air Permit</b>), rather than refluxing materials back to process vessels during product production. Nine condenser systems were found during the inspection that must comply with 40 CFR §§ 265.1060(a) and 265.1033.</p> <p>And, for example, PCI has not been monitoring and inspecting the condenser systems used as control devices in accordance with 40 CFR § 265.1033(f)(2)(vi).</p> |                    |

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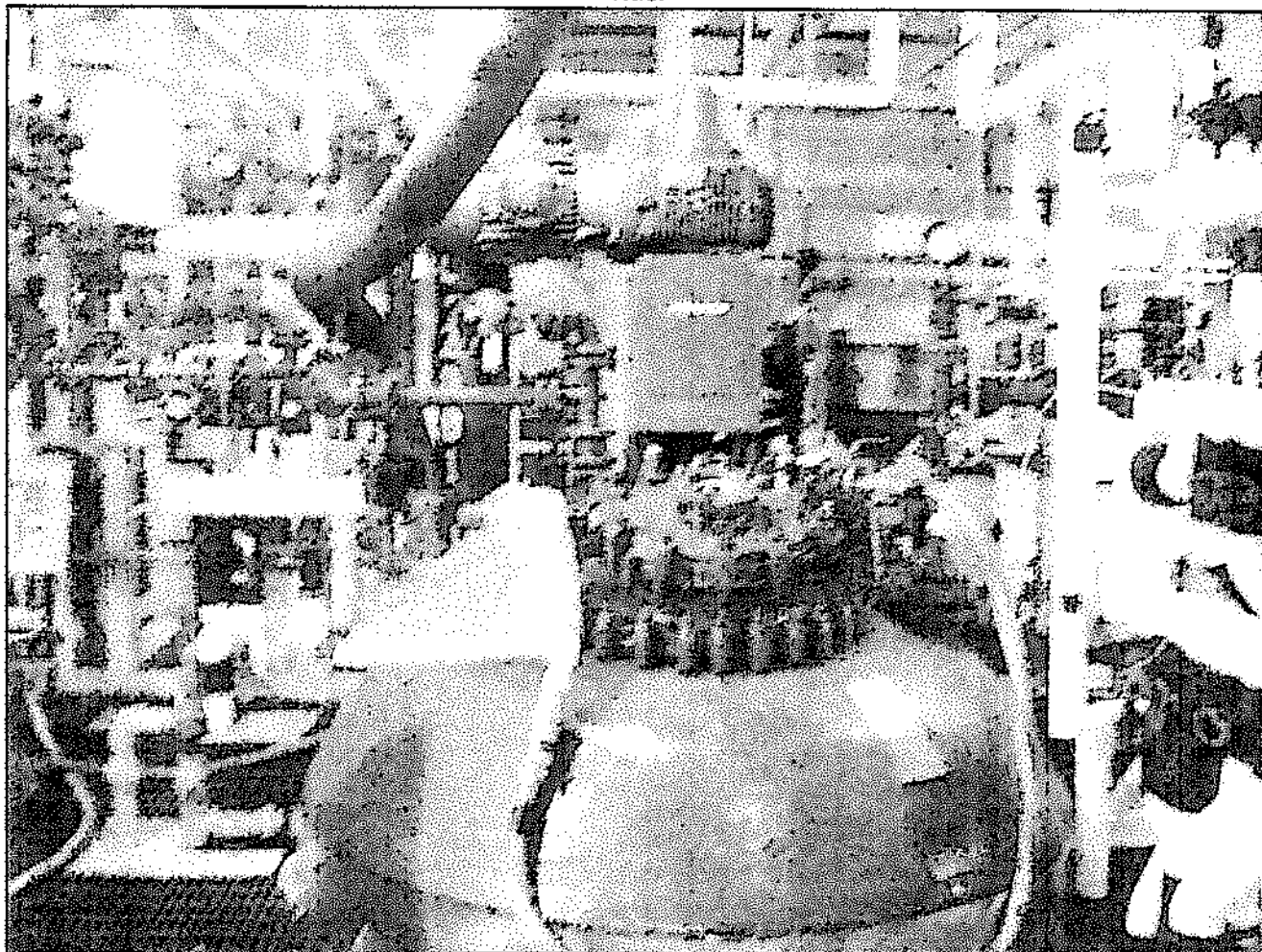
## AREAS OF NONCOMPLIANCE

|    | Regulatory Citation   | Finding/Observation  | Evidence Reference   |
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| 6. | <p>([degrees] C) or <math>\pm 0.5</math> [degrees] C, whichever is greater. The temperature sensor shall be installed at a location in the exhaust vent stream from the condenser exit (i.e., product side).</p> <p><b>40 CFR § 265.1084(a)(1)</b> -- An owner or operator shall determine the average VO concentration at the point of waste origination for each hazardous waste placed in a waste management unit exempted under the provisions of § 265.1083(c)(1) of this subpart from using air emission controls in accordance with standards specified in § 265.1085 through § 265.1088 of this subpart as applicable to the waste management unit.</p> <p><b>40 CFR § 265.1083(c)</b> -- A tank, surface impoundment, or container is exempt from standards specified in § 265.1085 through 265.1088 of this subpart... provided that the waste management unit is one of the following: (1) A tank ... for which all hazardous waste entering the unit has an average VO concentration at the point of waste origination of less than 500 parts per million by weight (ppmw). The average VO concentration shall be determined using the procedures specified in § 265.1084(a) of this subpart.</p> | <p><b>FINDING:</b></p> <p>PCI operates at least seven tanks that collect hazardous waste that have not been evaluated for volatile organic (VO) concentration at the point of waste origination to determine the applicability of Subpart CC of 40 CFR § 265 (40 CFR § 262.34(a)(1)(ii)) requirements. Moreover, these seven tanks collect spent solvents which are likely above the 500 parts per million by weight (ppmw) VO concentration threshold for regulation under Subpart CC of the 40 CFR § 265.</p> <p><b>NOTES:</b></p> <p><b>40 CFR § 265.1083(b)</b> -- The owner or operator shall control air pollutant emissions from each hazardous waste management unit in accordance with standards specified in §§ 265.1085 through 265.1088 of this subpart as applicable to the hazardous waste management unit...</p> <p>Without making a determination of the wastes' VO concentration at the point of waste origination, the following tanks cannot be exempted from Subpart CC of 40 CFR § 265 [40 CFR § 262.34(a)(3)] requirements.</p> <ul style="list-style-type: none"> <li>• Six knock-out pots</li> <li>• One hazardous waste collection tank (HW-101)</li> </ul> <p>These seven tanks collect spent solvents which are likely above the 500 ppmw VO concentration threshold for regulation under Subpart CC of 40 CFR Part 265 (<b>Appendix C</b>). Additionally, PCI provided waste profile No. P110512021 (<b>Appendix H</b>), which represents the hazardous waste pumped into drums from</p> | <p><b>Appendix C</b> --<br/>CHEMREC Waste Profiles</p> <p><b>Appendix H</b> --Waste Profile P110512021</p> |

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| AREAS OF NONCOMPLIANCE                 |                     |   |   |
|  | Regulatory Citation | Finding/Observation   | Evidence Reference  |
|  |                     | tank HW-101. This profile shows the waste to have VOCs greater than 500 ppmw and to be subject to Subpart CC controls.  |   |
| AREAS OF CONCERN                       |                     |   |   |
| A.                                     |                     | The industrial discharge permit, issued on October 29, 2014, does not include the scrubber water as part of the effluent discharged to the City of Newburyport sewer system ( <b>Appendix I</b> ). This may result in the wastewater not being monitored for all the appropriate constituents prior to discharge to the City of Newburyport sewer system. ( <b>Appendix A</b> – Photograph No. IMG0041)   | <b>Appendix I</b> – Industrial Discharge Permit<br><br><b>Appendix A</b> – NEIC Photographs |
| B.                                     |                     | The Clean Air Act requirements for PCI are based on a letter issued to the prior facility at that location, which manufactured different products. The Massachusetts Department of Environmental Protection issued an Amended Final Approval letter on June 19, 1997 to Borregaard Synthesis, Inc. ( <b>Appendix G</b> ). According to Elie Saikali, PCI director of manufacturing, PCI purchased the facility from Borregaard Synthesis, Inc. (Borregaard) in 2005. Borregaard manufactured specialty organic chemicals for the pharmaceutical, epoxy, photo-sensitive chemical, and agro-chemical markets, and the permit is based on the chemicals used in these processes. PCI manufactures active pharmaceutical ingredients, which may involve different chemicals and different amounts of chemicals than Borregaard manufactured. | <b>Appendix G</b> – Clean Air Act Permit  |

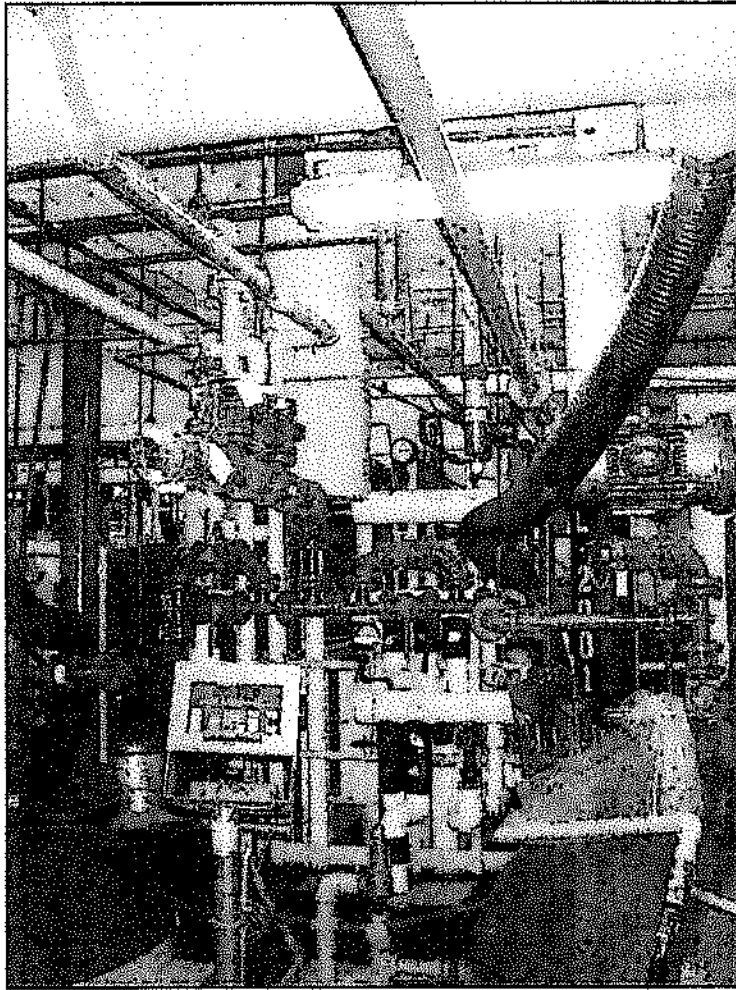


Title:



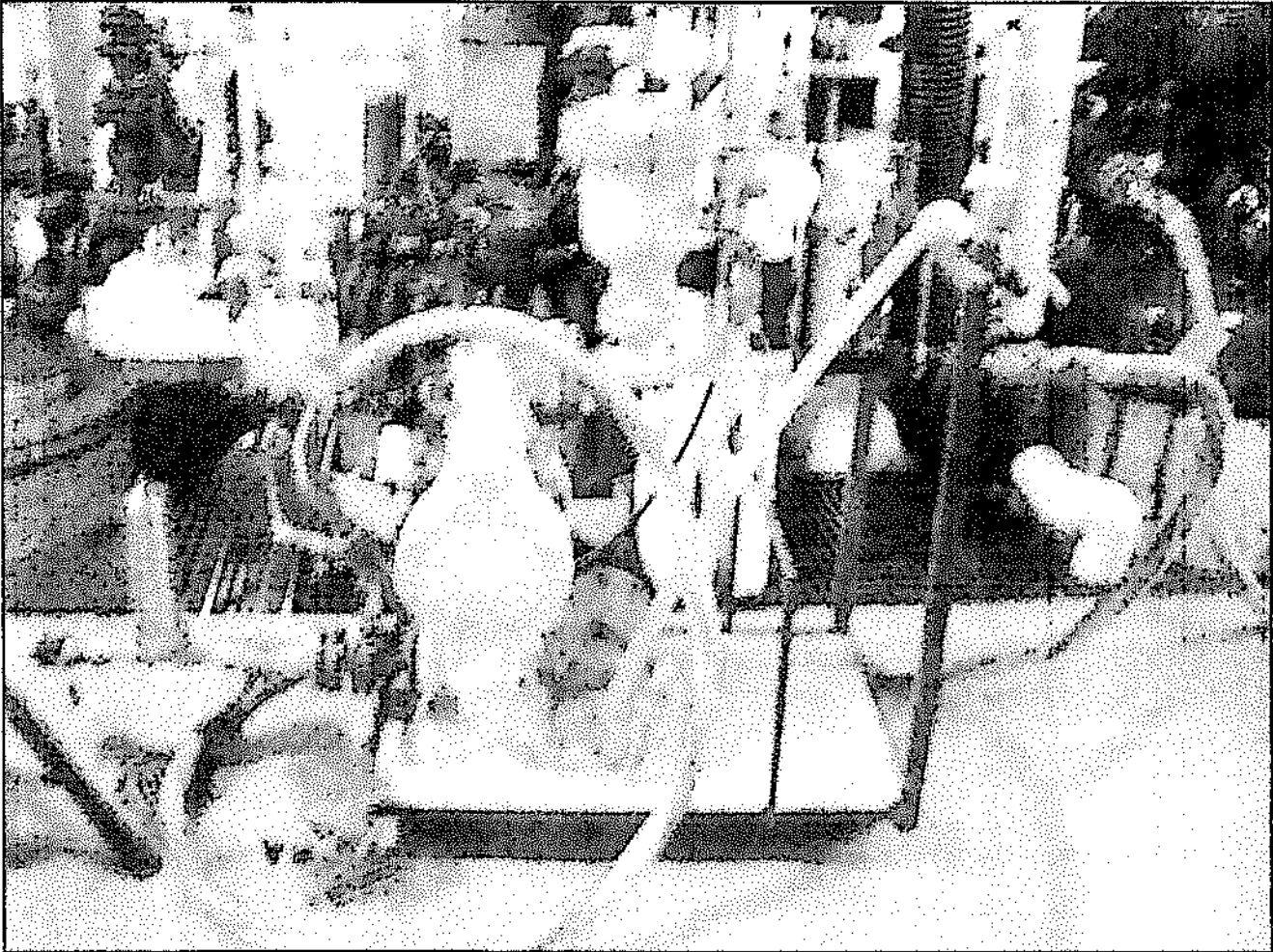
| Attributes         |   |
|--------------------|---|
| Photographer       | A. Ruhs   |
| Original File Name | IMG0001.JPG   |
| Date/Time          | 6/13/2017 3:57:53 PM  |
| Description        | GL-2001 vessel overview shot with orange rupture line in background, condenser to the left (white), and filling wand and hose, and elephant trunk (black) |

Title:



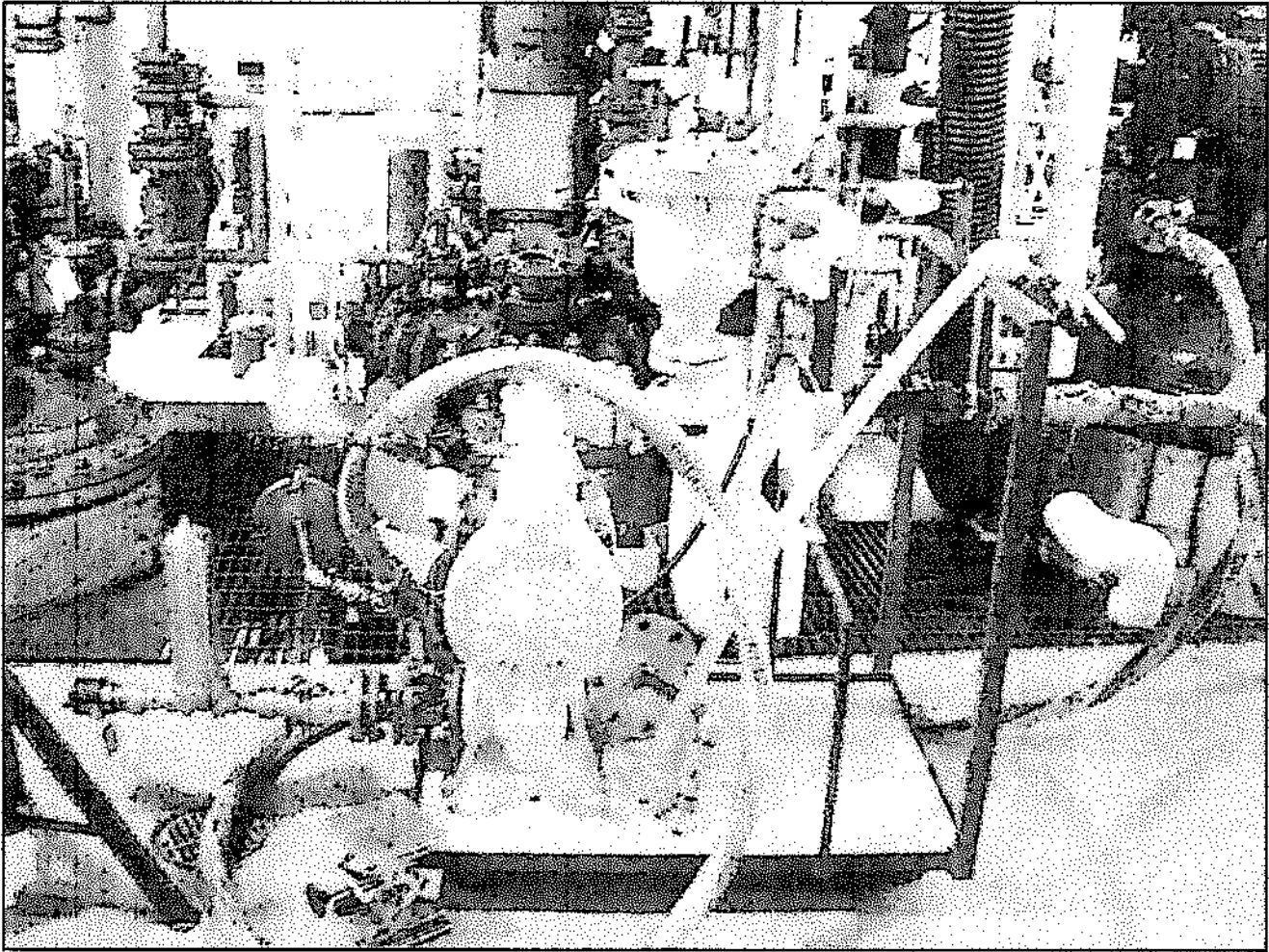
| Attributes         |  |
|--------------------|--|
| Photographer       | A. Ruhs  |
| Original File Name | IMGP0002.JPG   |
| Date/Time          | 6/13/2017 4:00:28 PM   |
| Description        | Condenser (white) and scrubber line up top (green) for GL-2001 (right) and GL-2002 (left). |

Title: PCI Synthesis



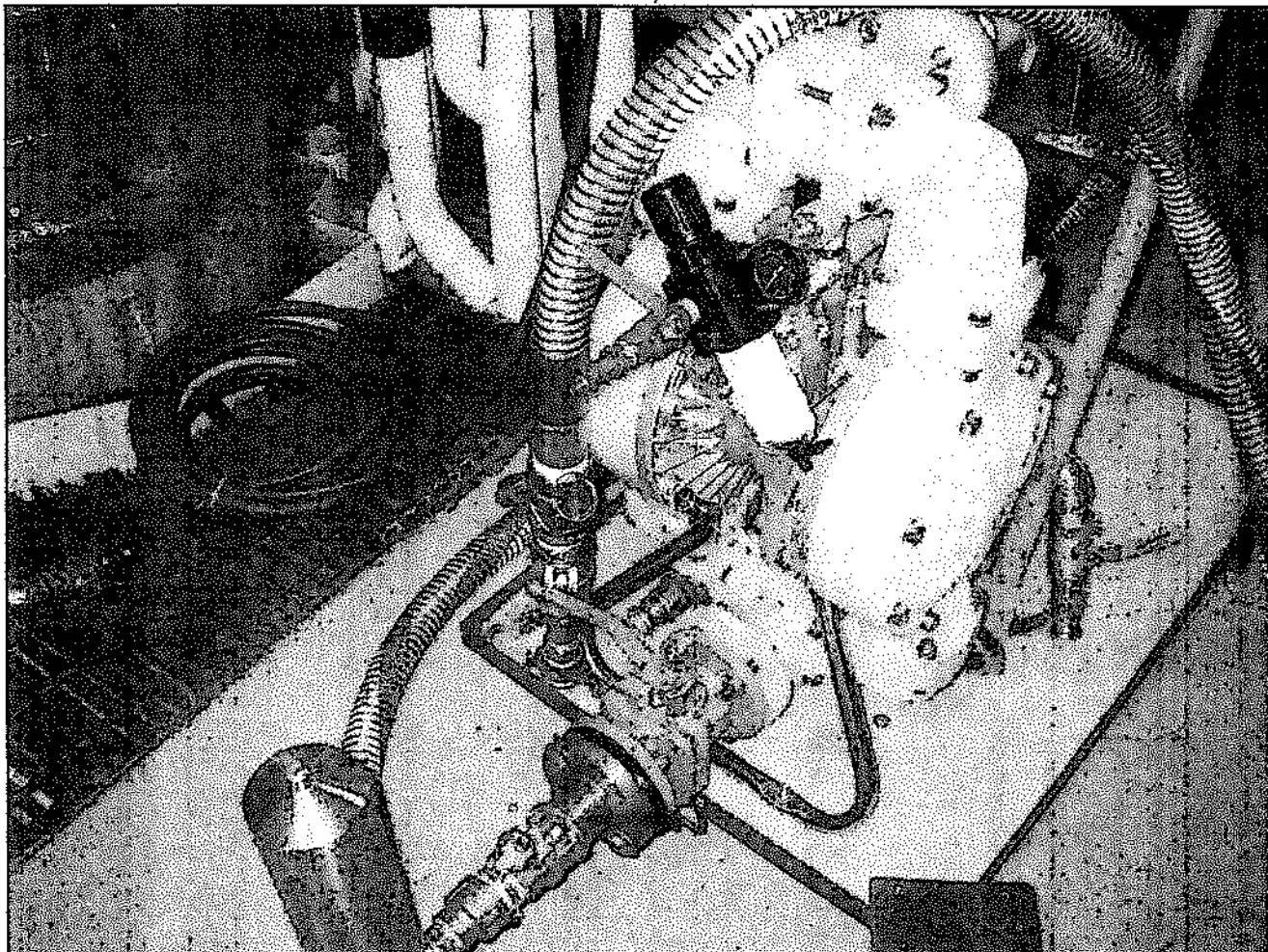
| Attributes         |   |
|--------------------|---|
| Photographer       | A. Ruhs   |
| Original File Name | IMGP0003.JPG  |
| Date/Time          | 6/13/2017 4:10:11 PM  |
| Description        | Portable cleaning pump system (PS-01) staged for future cleaning (blurry) |

Title: PCI Synthesis

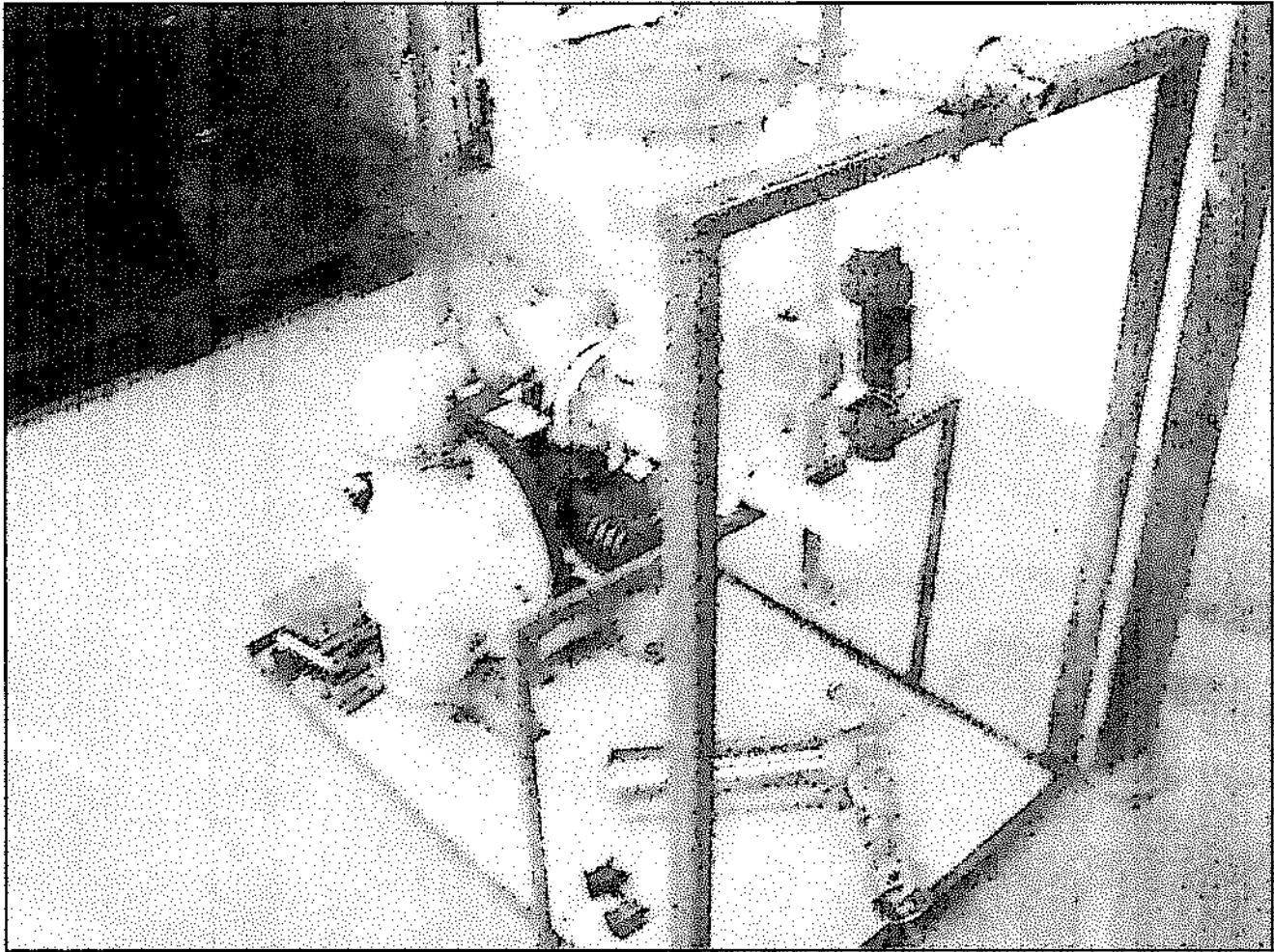


| Attributes         |  |
|--------------------|--|
| Photographer       | A. Ruhs  |
| Original File Name | IMG0004.JPG  |
| Date/Time          | 6/13/2017 4:10:27 PM   |
| Description        | Portable cleaning pump system (PS-01) staged for future cleaning ( less blurry). |

Title: PCI Synthesis

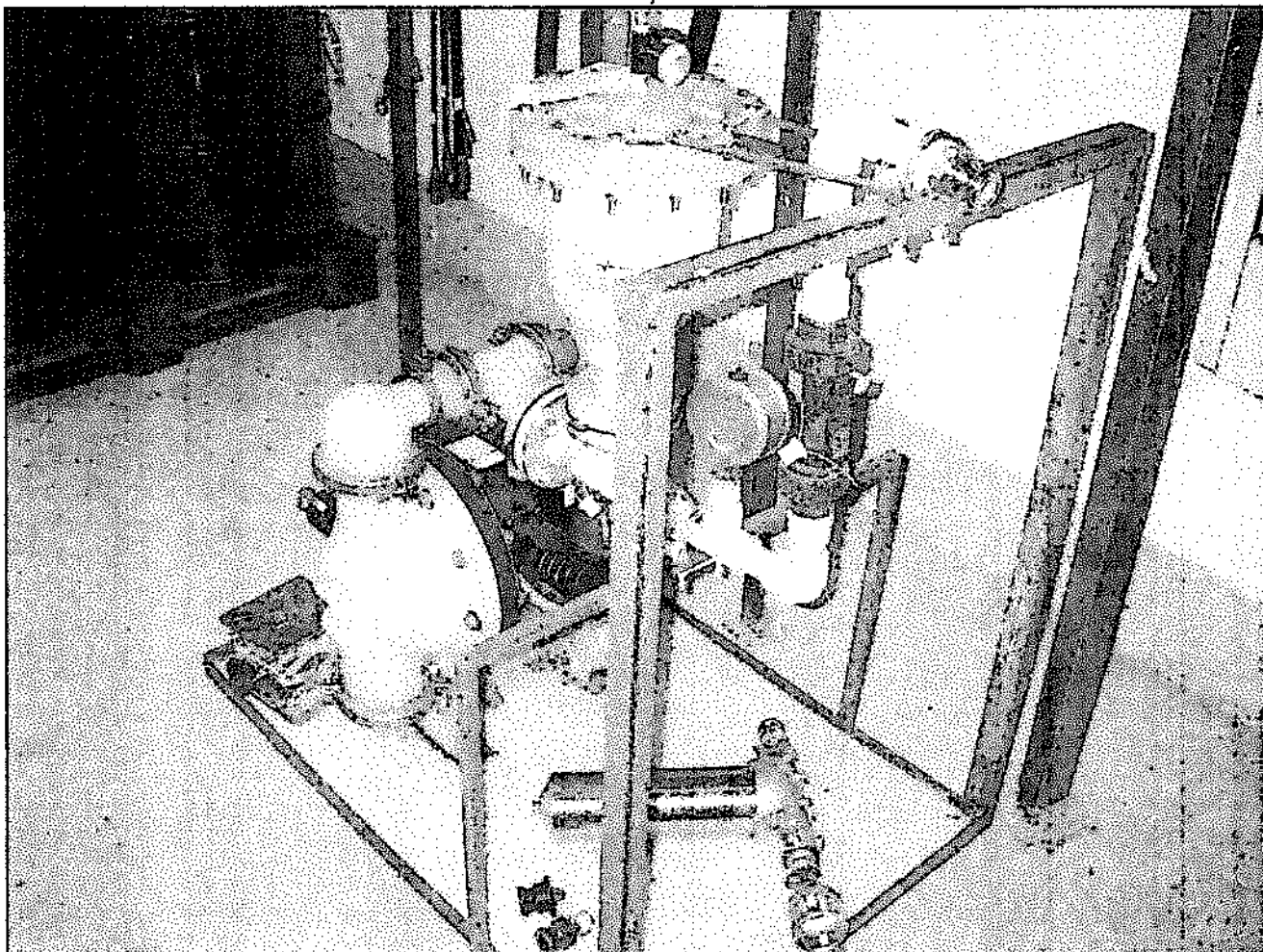


| Attributes         |   |
|--------------------|---|
| Photographer       | A. Ruhs   |
| Original File Name | IMGP0005.JPG  |
| Date/Time          | 6/13/2017 4:15:57 PM  |
| Description        | Close-up on the portable pump cleaning system, with 4 open ends (wand, valve attachment both ends, and hose end). |

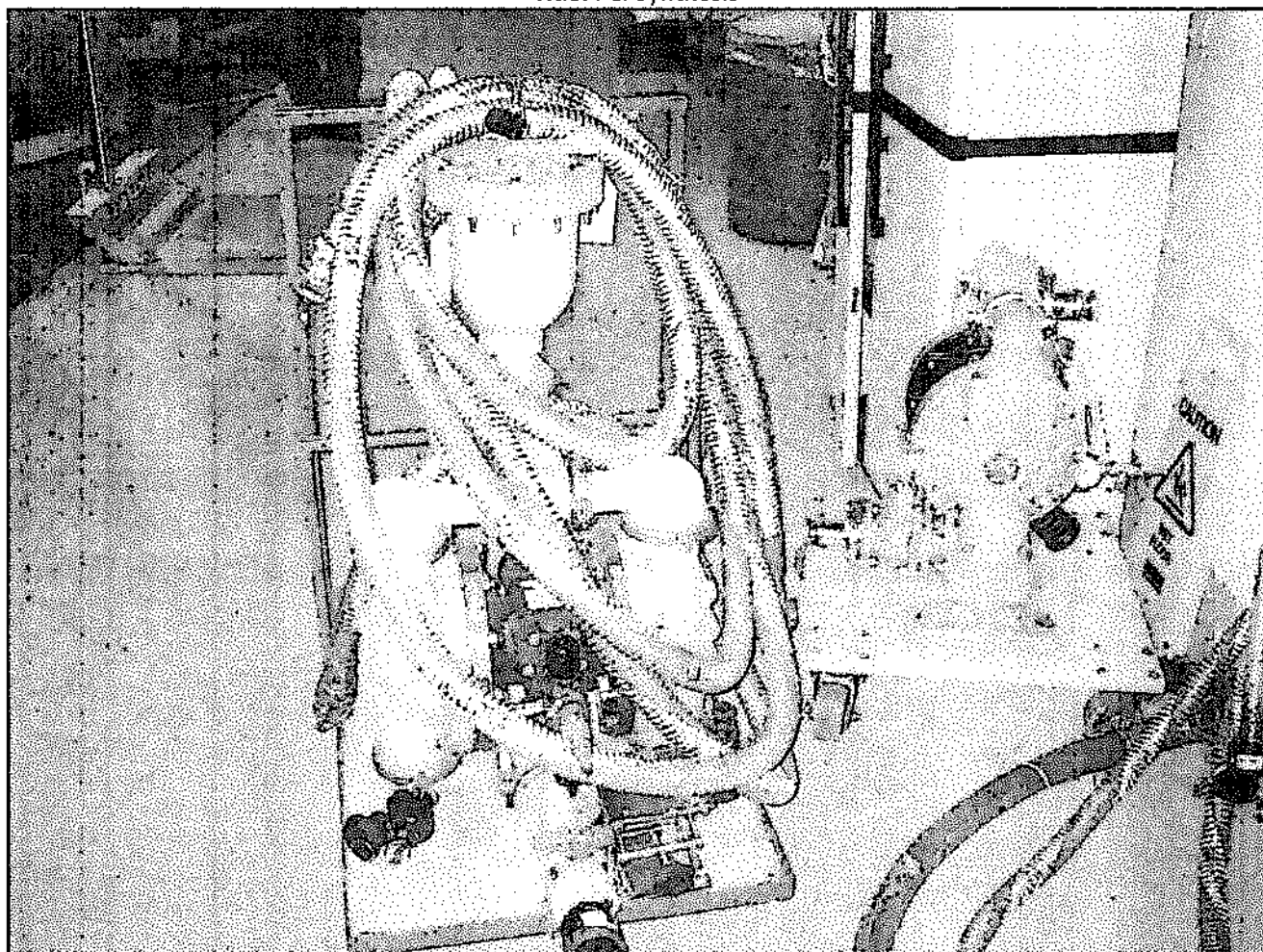


| Attributes         |   |
|--------------------|---|
| Photographer       | A. Ruhs   |
| Original File Name | IMGP0006.JPG  |
| Date/Time          | 6/13/2017 4:20:25 PM  |
| Description        | Disconnected (hose removed) portable pump, open end (blurry). |

Title: PCI Synthesis

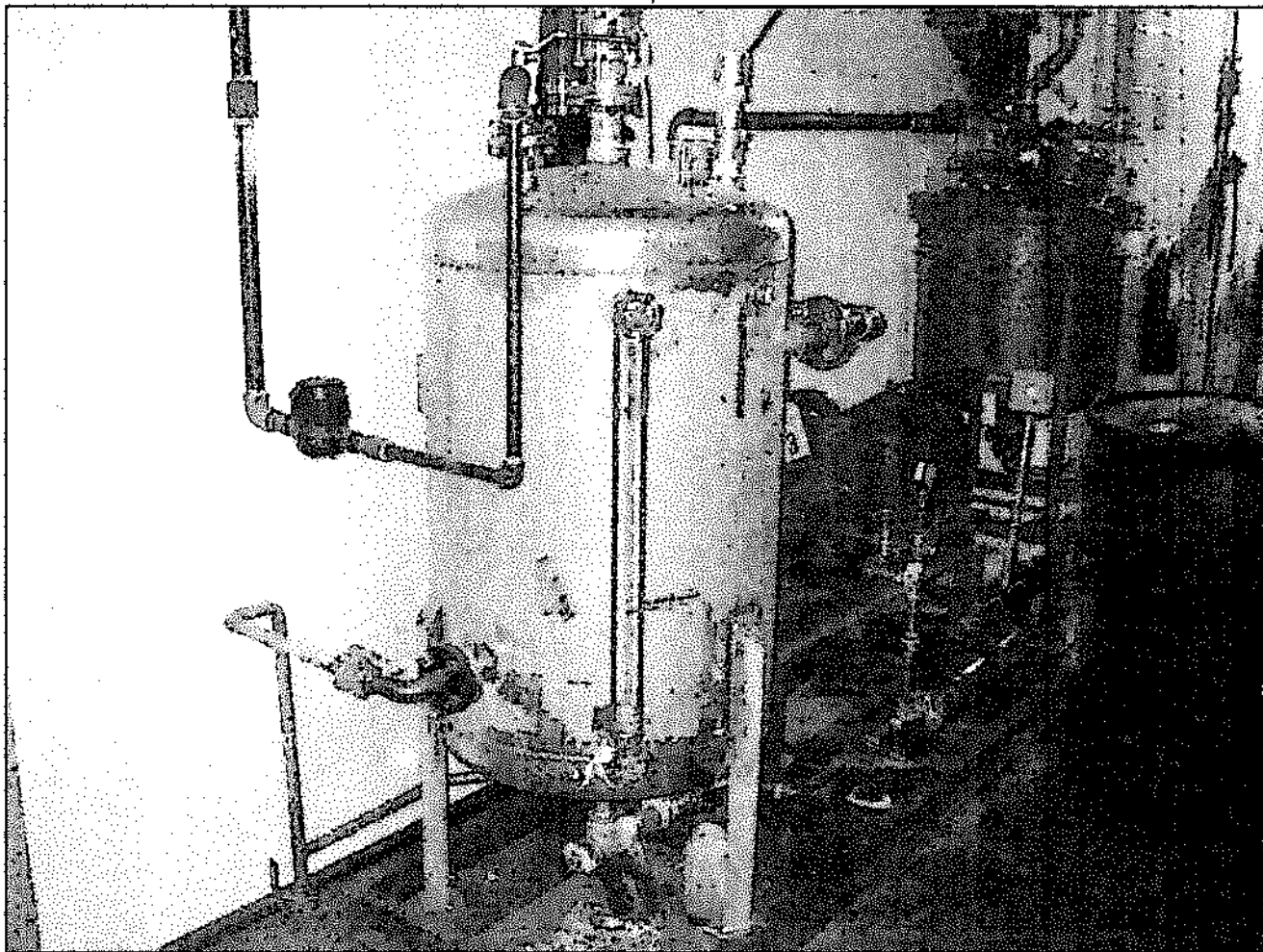


| Attributes         |  |
|--------------------|--|
| Photographer       | A. Ruhs  |
| Original File Name | IMGP0007.JPG   |
| Date/Time          | 6/13/2017 4:20:47 PM                                 |
| Description        | Disconnected (hose removed) portable pump, open end. |



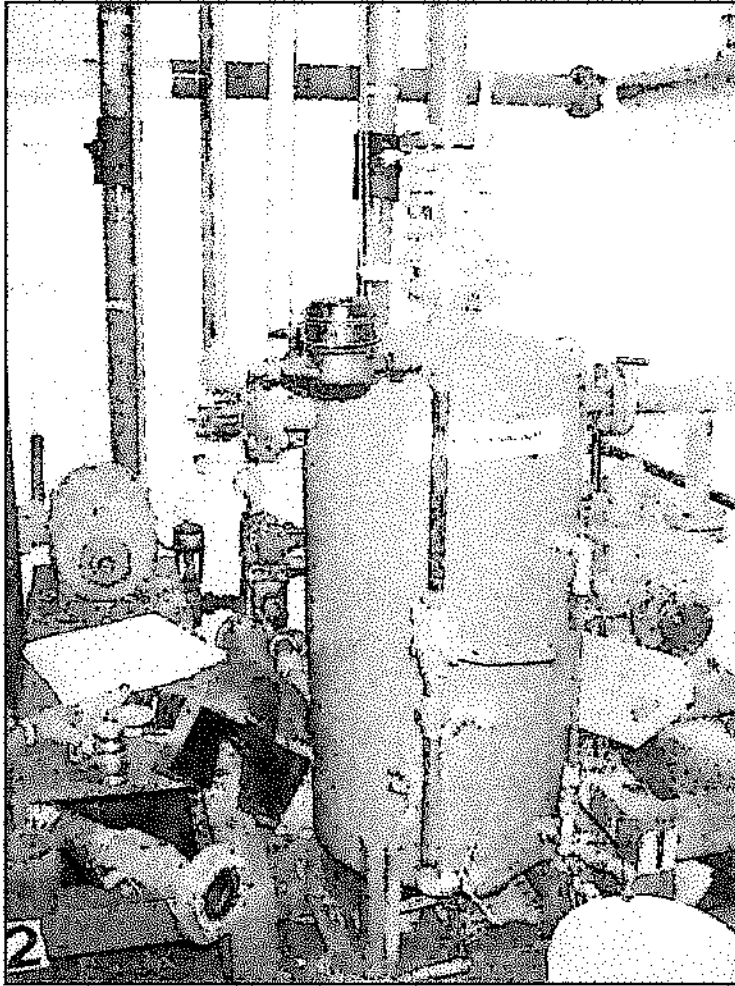
| Attributes         |   |
|--------------------|---|
| Photographer       | A. Ruhs   |
| Original File Name | IMG0008.JPG   |
| Date/Time          | 6/13/2017 4:25:33 PM  |
| Description        | Two more disconnected portable pump for cleaning near GL-502 and GL-1003. |

Title: PCI Synthesis



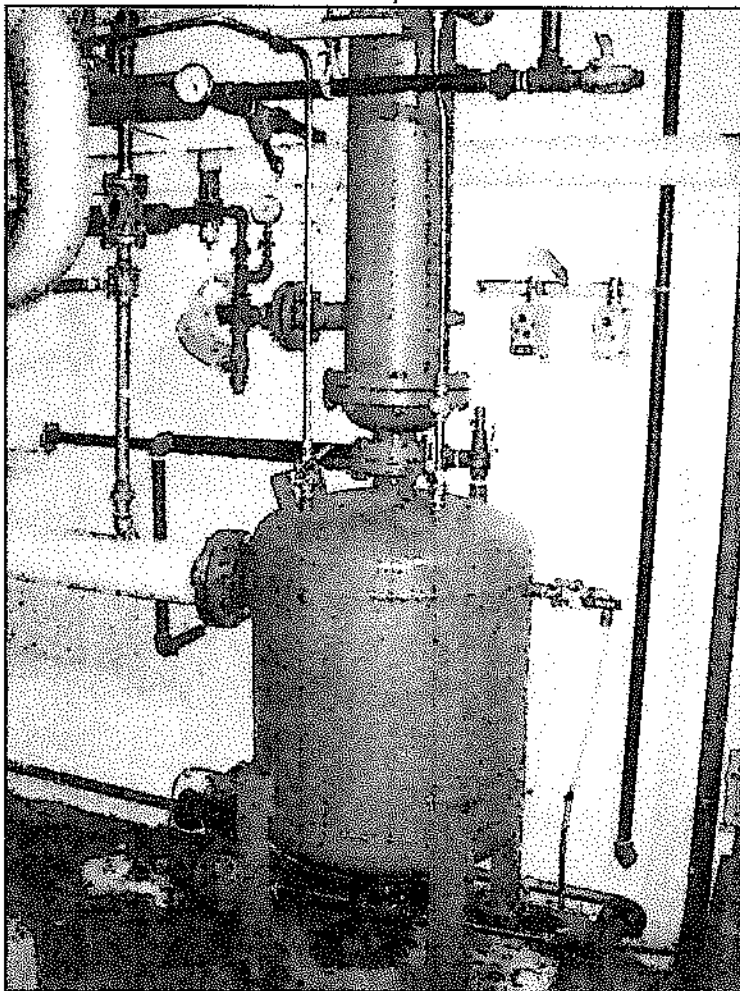
| Attributes         |  |
|--------------------|--|
| Photographer       | A. Ruhs  |
| Original File Name | IMGP0009.JPG   |
| Date/Time          | 6/13/2017 4:30:35 PM   |
| Description        | Liquid ring pump (LRP) #3 associated with any vent header - low vacuum line. |

Title: PCI Synthesis

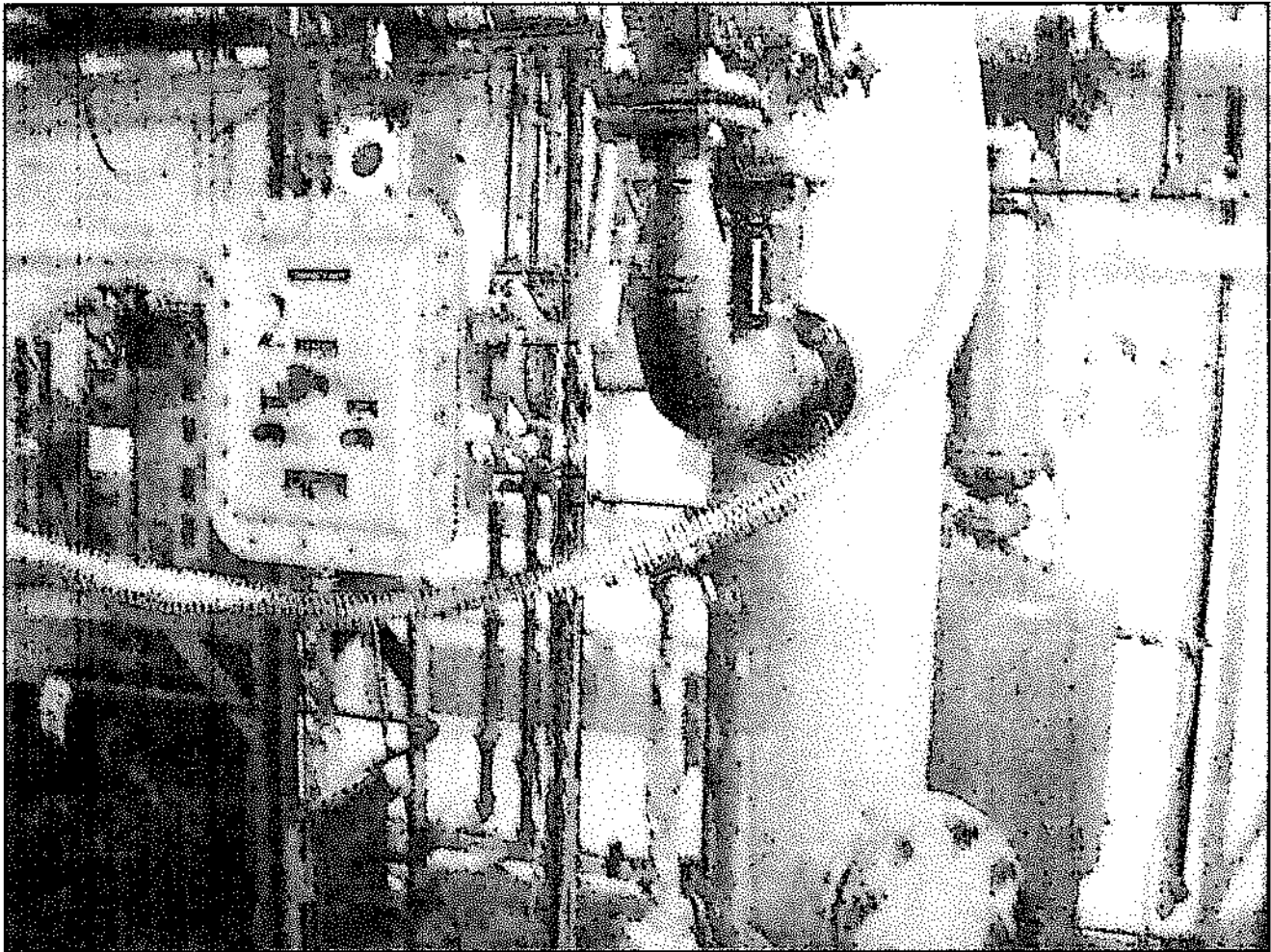


| Attributes         |   |
|--------------------|---|
| Photographer       | A. Ruhs   |
| Original File Name | IMGP0010.JPG  |
| Date/Time          | 6/13/2017 4:32:01 PM  |
| Description        | LRP-1 (#2 removed from service - left side) also can be used for any header as part of low vacuum system. |

Title: PCI Synthesis

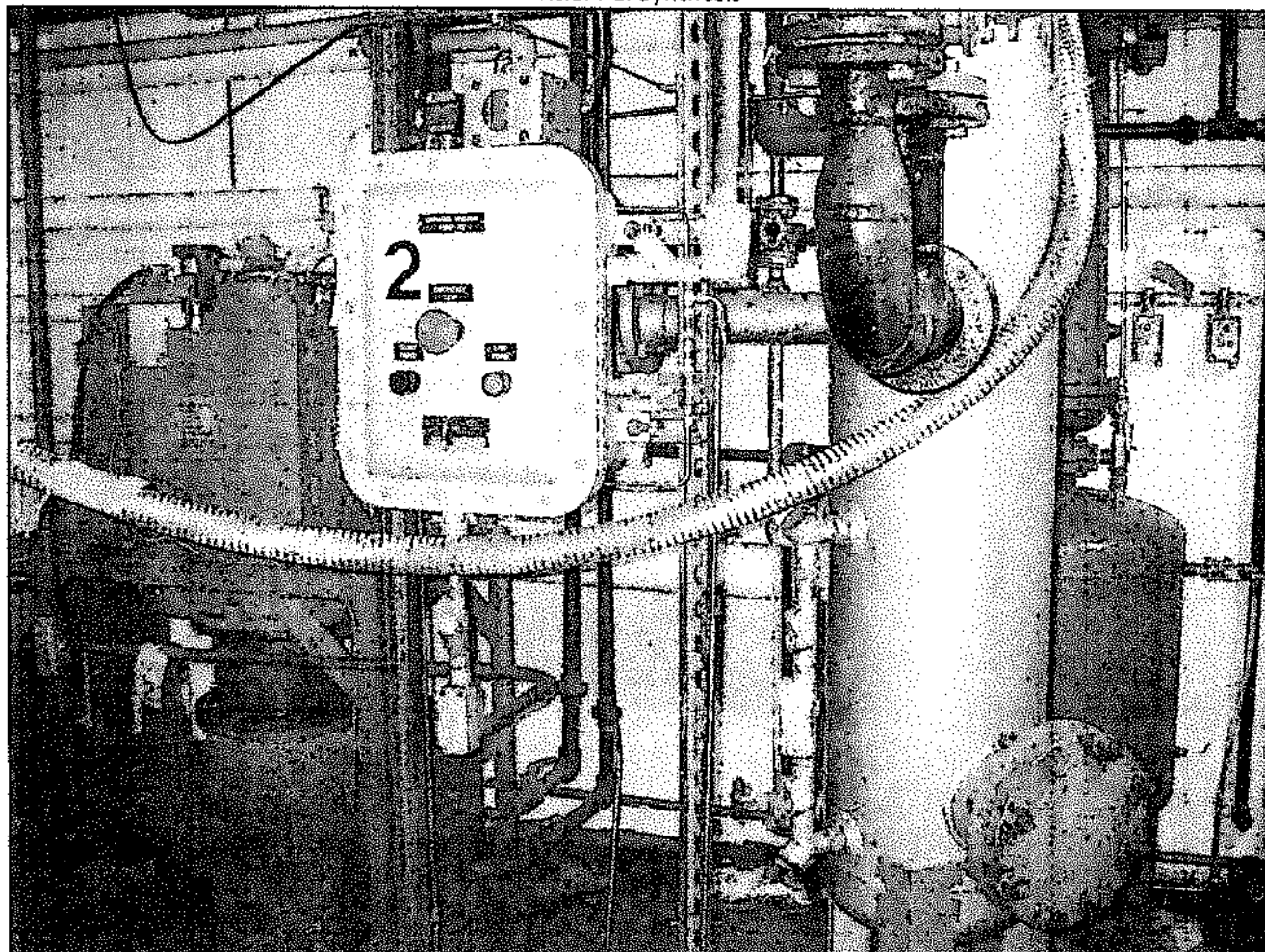


| Attributes         |   |
|--------------------|---|
| Photographer       | A. Ruhs   |
| Original File Name | IMGP0011.JPG  |
| Date/Time          | 6/13/2017 4:34:37 PM  |
| Description        | Edwards #2 catch pot (hazardous waste collection) not labelled. |

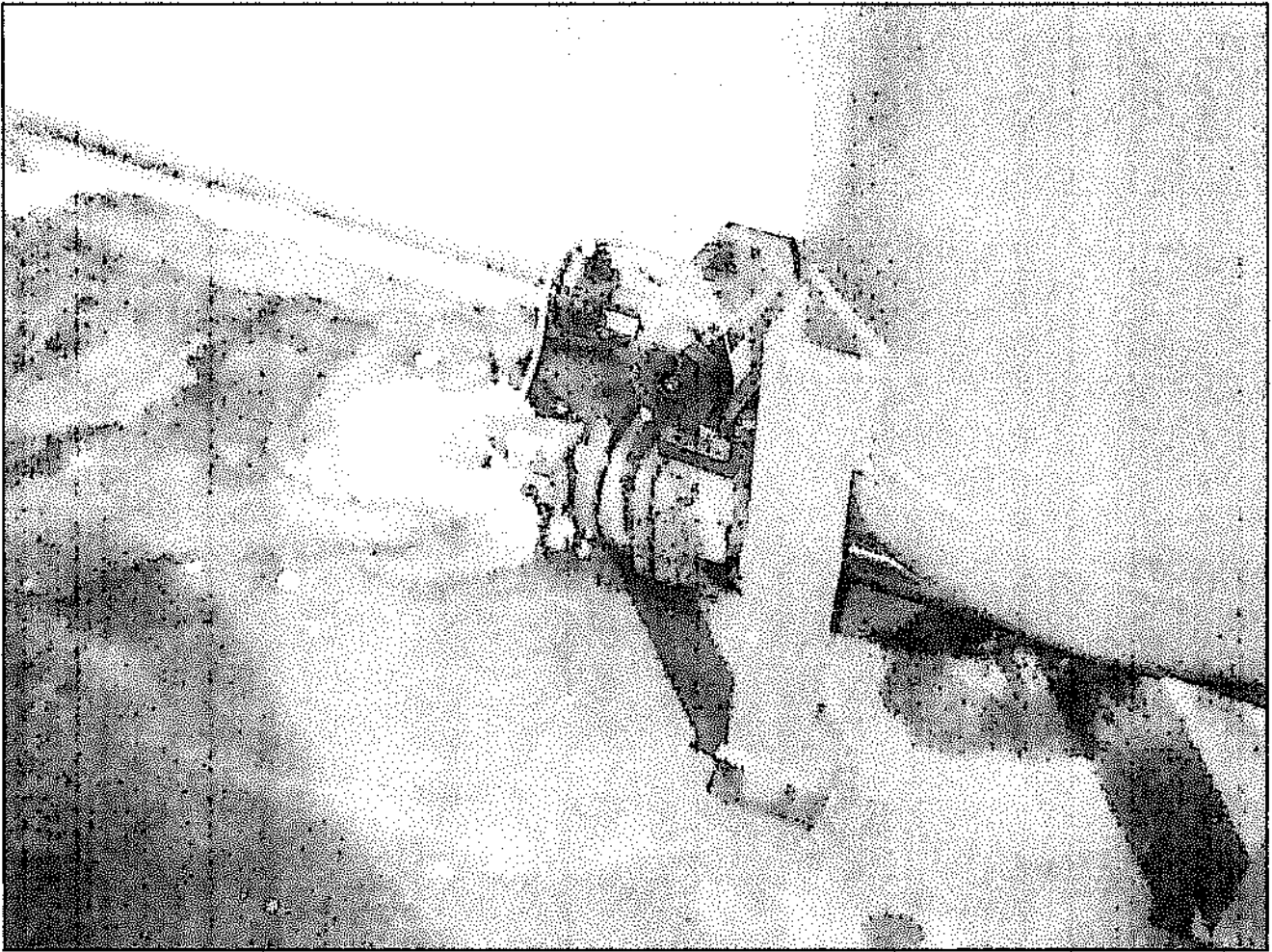


| Attributes         |   |
|--------------------|---|
| Photographer       | A. Ruhs   |
| Original File Name | IMGP0012.JPG  |
| Date/Time          | 6/13/2017 4:34:58 PM  |
| Description        | Edwards #2 condenser pump and blue catch pot behind (blurry). |

Title: PCI Synthesis

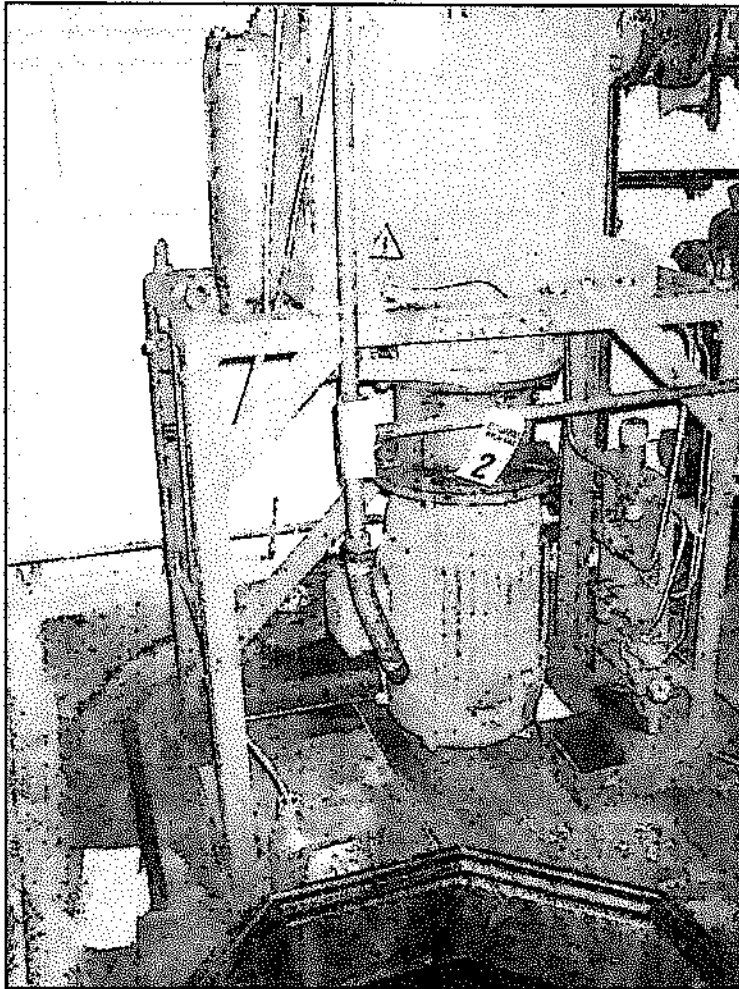


| Attributes         |  |
|--------------------|--|
| Photographer       | A. Ruhs  |
| Original File Name | IMG0013.JPG  |
| Date/Time          | 6/13/2017 4:36:23 PM                                 |
| Description        | Edwards #2 condenser pump and blue catch pot behind. |



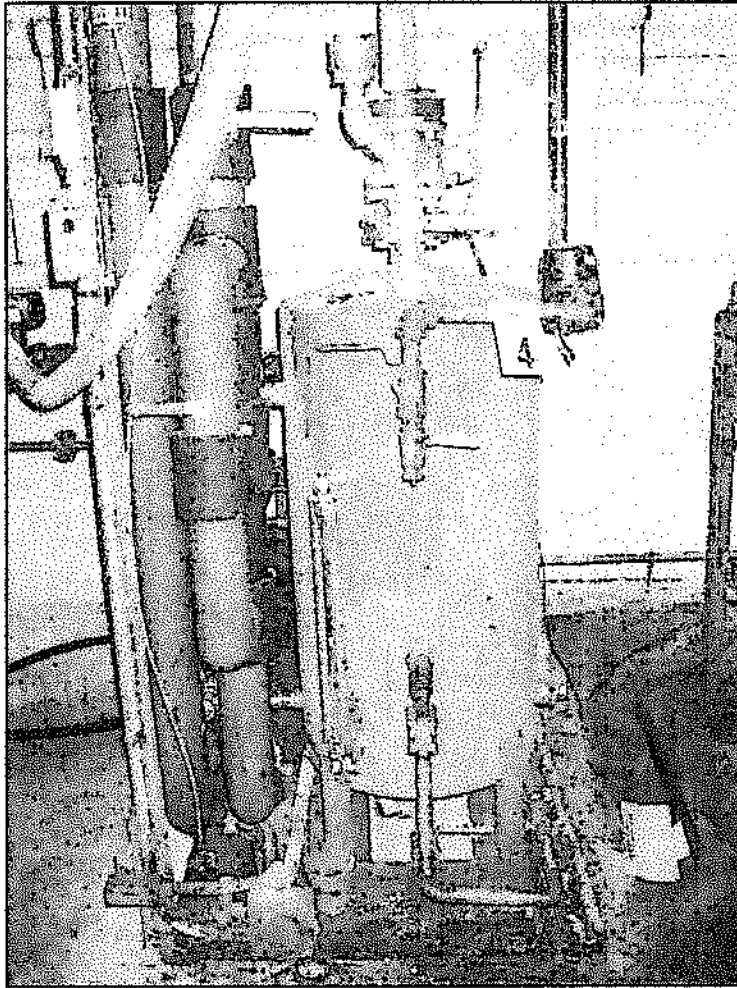
| Attributes         |                                       |
|--------------------|---------------------------------------|
| Photographer       | A. Ruhs                               |
| Original File Name | IMGP0014.JPG                          |
| Date/Time          | 6/13/2017 4:36:34 PM                  |
| Description        | Drain line from Edwards #2 catch pot. |

Title: PCI Synthesis



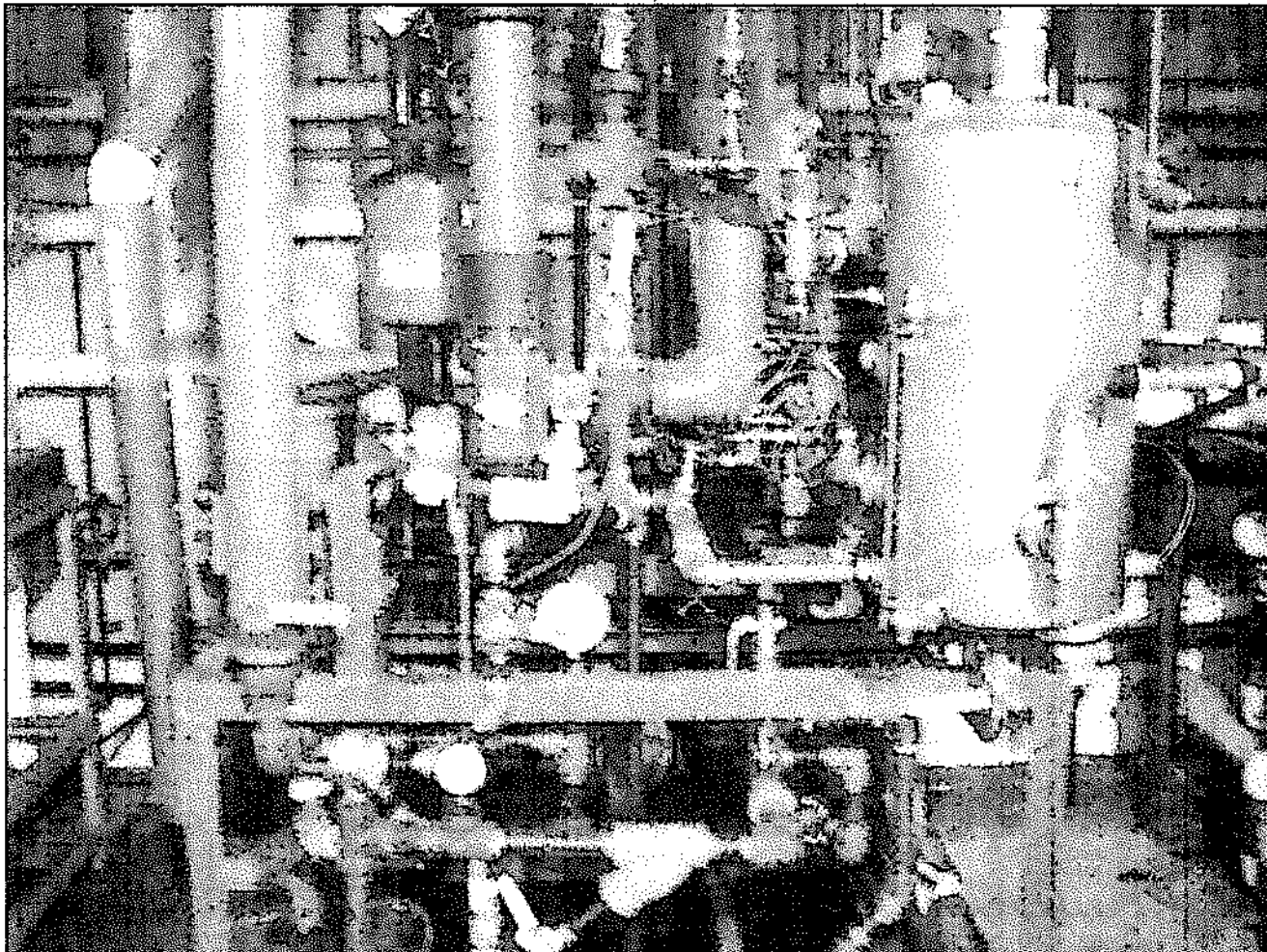
| Attributes         |   |
|--------------------|---|
| Photographer       | A. Ruhs                                   |
| Original File Name | IMGP0015.JPG                              |
| Date/Time          | 6/13/2017 4:37:51 PM                      |
| Description        | Edwards pump #2 used for PFN-1 and PFN-3. |

Title: PCI Synthesis

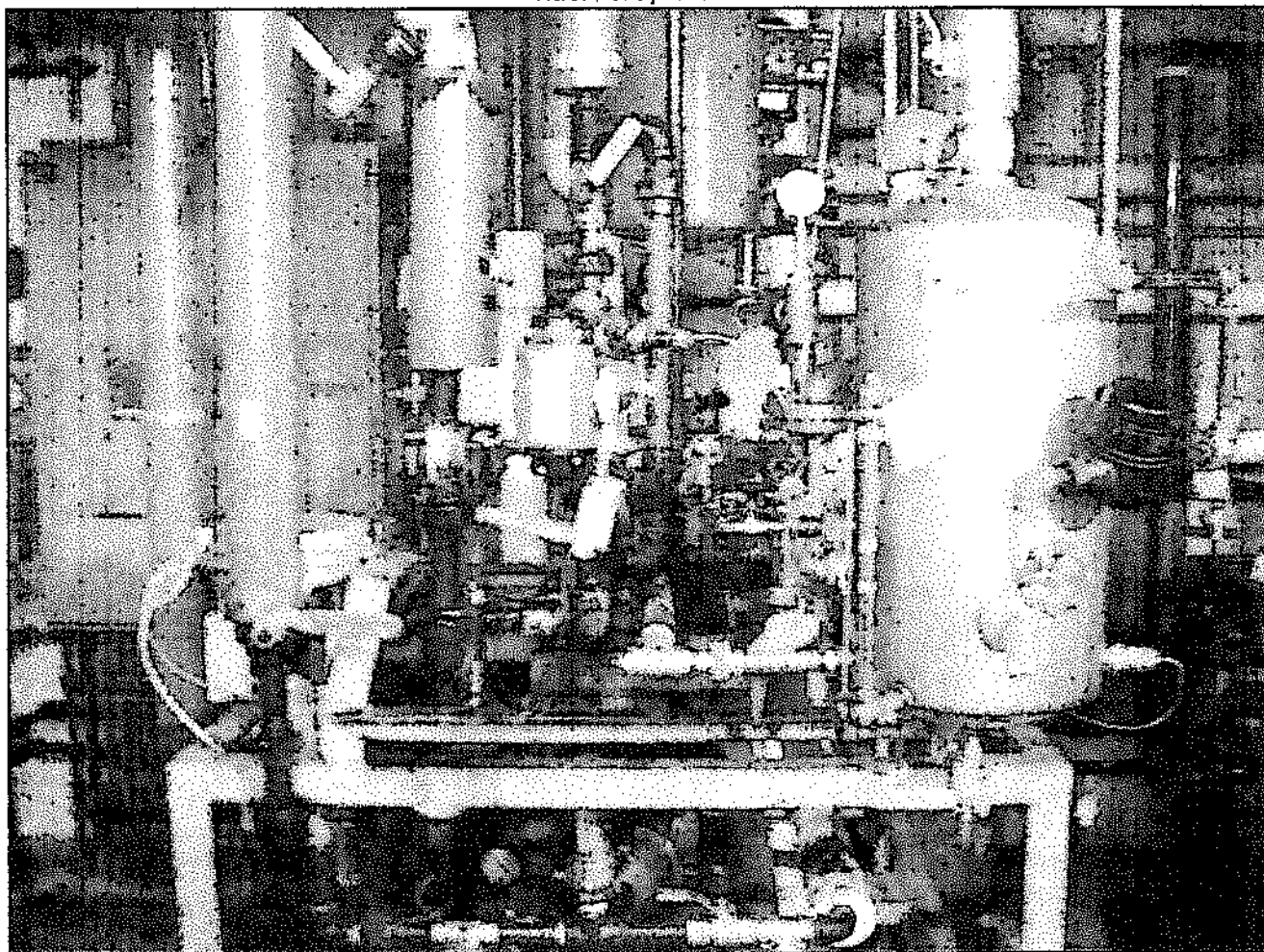


| Attributes         |                           |
|--------------------|---------------------------|
| Photographer       | A. Ruhs                   |
| Original File Name | IMGP0016.JPG              |
| Date/Time          | 6/13/2017 4:38:00 PM      |
| Description        | LRP #4 used for dryer #6. |

Title: PCI Synthesis

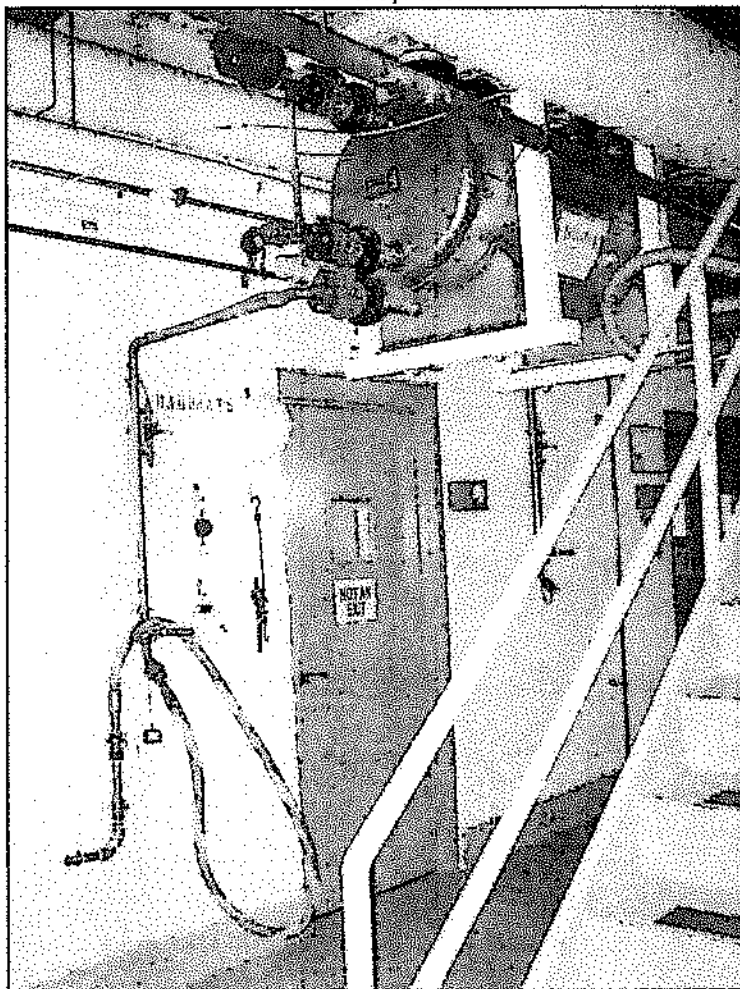


| Attributes         |  |
|--------------------|--|
| Photographer       | A. Ruhs  |
| Original File Name | IMGP0017.JPG   |
| Date/Time          | 6/13/2017 4:39:15 PM   |
| Description        | LRP #6 liquid seal pot, silver tank, used to recirculate liquid for sealing pumps, which discharges to hazardous waste tank 101 when not operating. LRP #6 is used for drying racks 3 and 4. |



| Attributes         |   |
|--------------------|---|
| Photographer       | A. Ruhs   |
| Original File Name | IMG0018.JPG   |
| Date/Time          | 6/13/2017 4:40:05 PM  |
| Description        | LRP #5 and liquid seal pot, associated with drying rack #1 and 2. |

Title: PCI Synthesis



| Attributes         |   |
|--------------------|---|
| Photographer       | A. Ruhs   |
| Original File Name | IMGP0019.JPG  |
| Date/Time          | 6/13/2017 4:50:03 PM  |
| Description        | All LRPs and PNF #1-3 condensed vapors end up here at hazardous waste tank HW-101. Hose to lower left and tank up top gets pumped off as hazardous waste. |

**Hazardous Waste**

Hazard(s): Corrosive / Ignitable

Actual Contents: Sodium hydroxide / Toluene / Acetone  
Isopropanol / Methanol / Ethyl acetate / Water / from HW101

pH (if aqueous) \_\_\_\_\_ (2-12.5)  
Source: Batch # \_\_\_\_\_ Step \_\_\_\_\_

Other \_\_\_\_\_  
Date \_\_\_\_/\_\_\_\_/\_\_\_\_ By \_\_\_\_\_

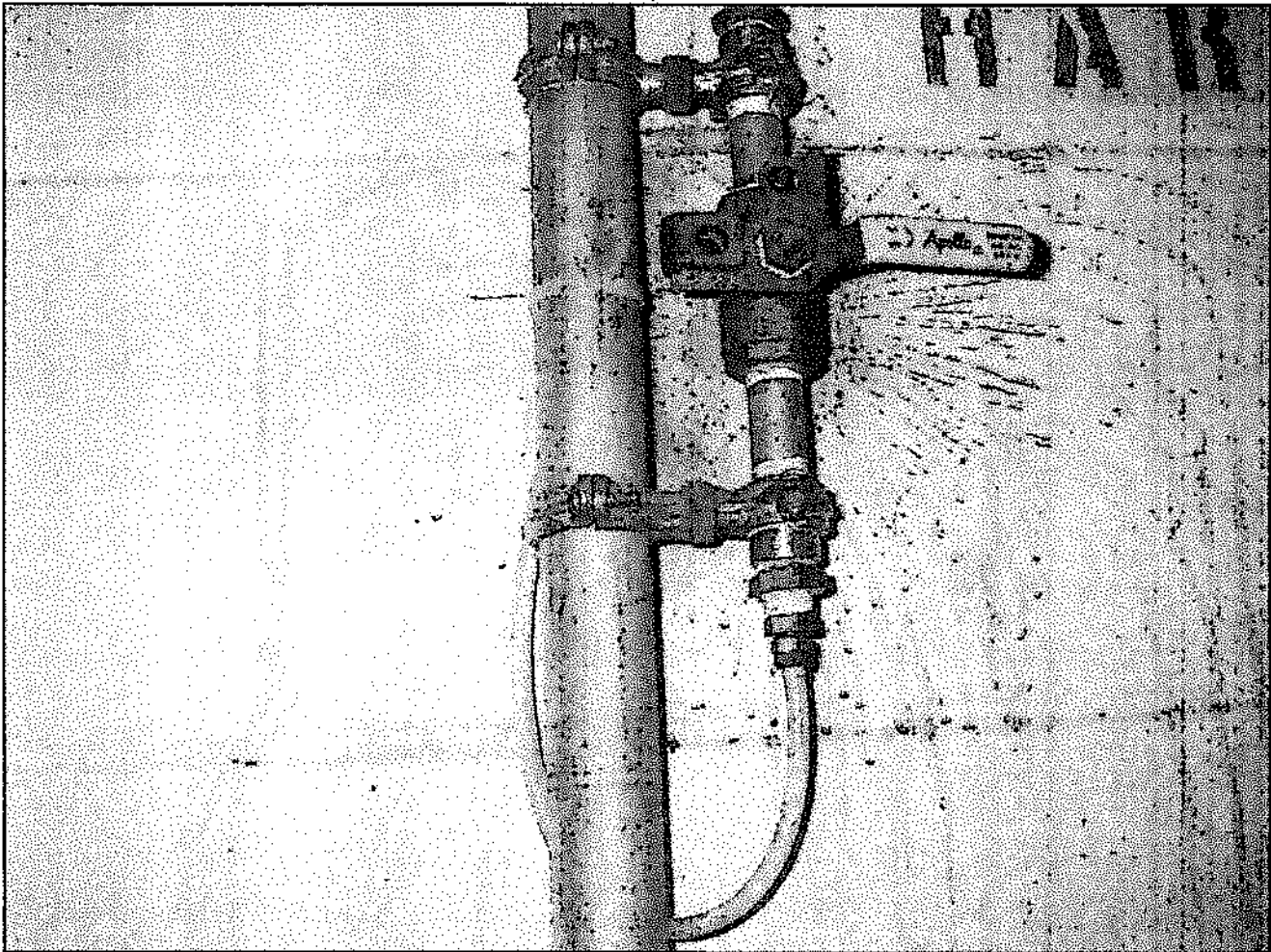
**PCIS**  
**LRP**

**HANDLE WITH CARE**

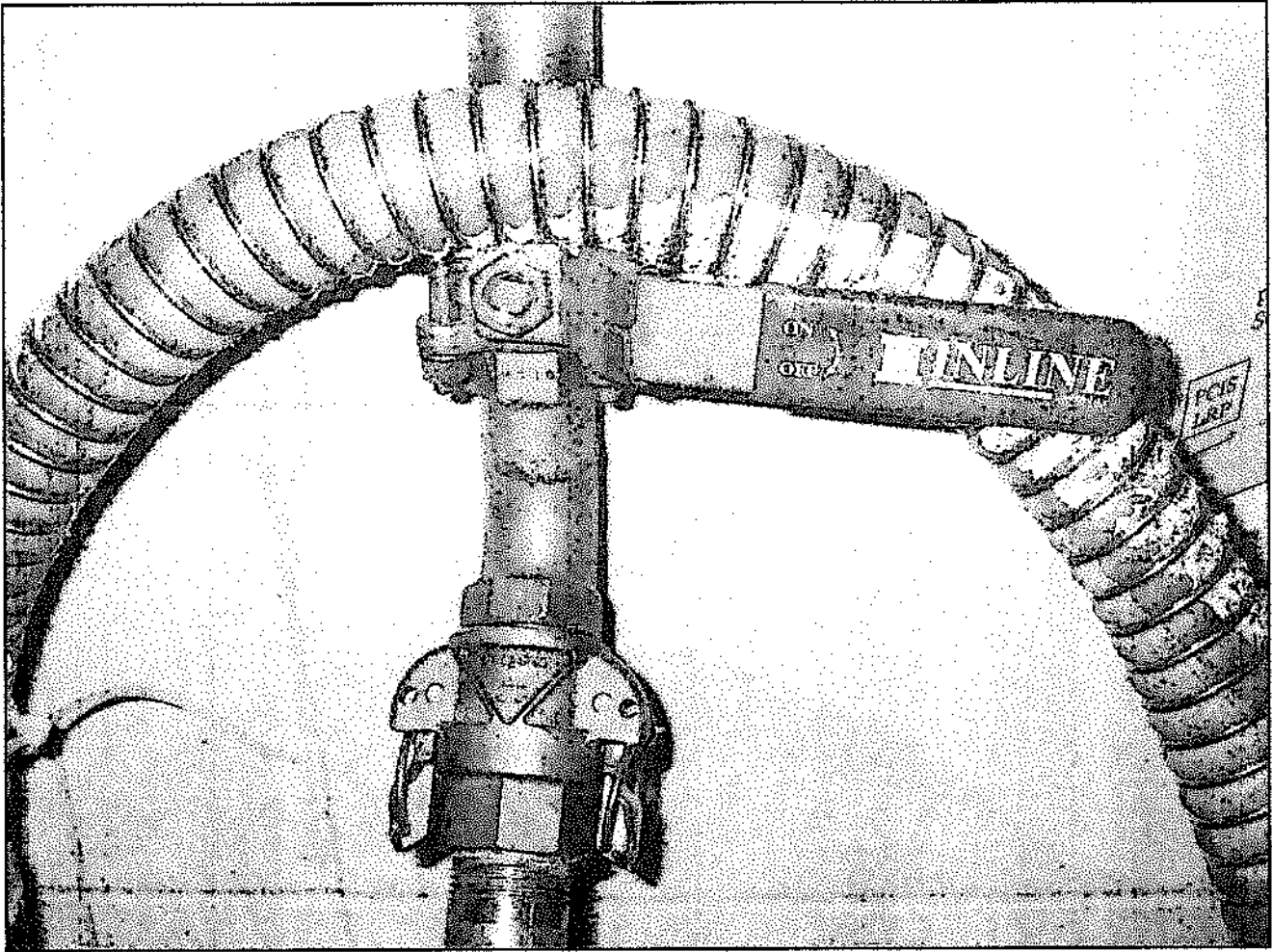
**FLAMMABLE**  
**CORROSIVE**

| Attributes         |   |
|--------------------|---|
| Photographer       | A. Ruhs                                   |
| Original File Name | IMGP0020.JPG                              |
| Date/Time          | 6/13/2017 4:53:12 PM                      |
| Description        | Hazardous waste documentation for HW-101. |

Title: PCI Synthesis

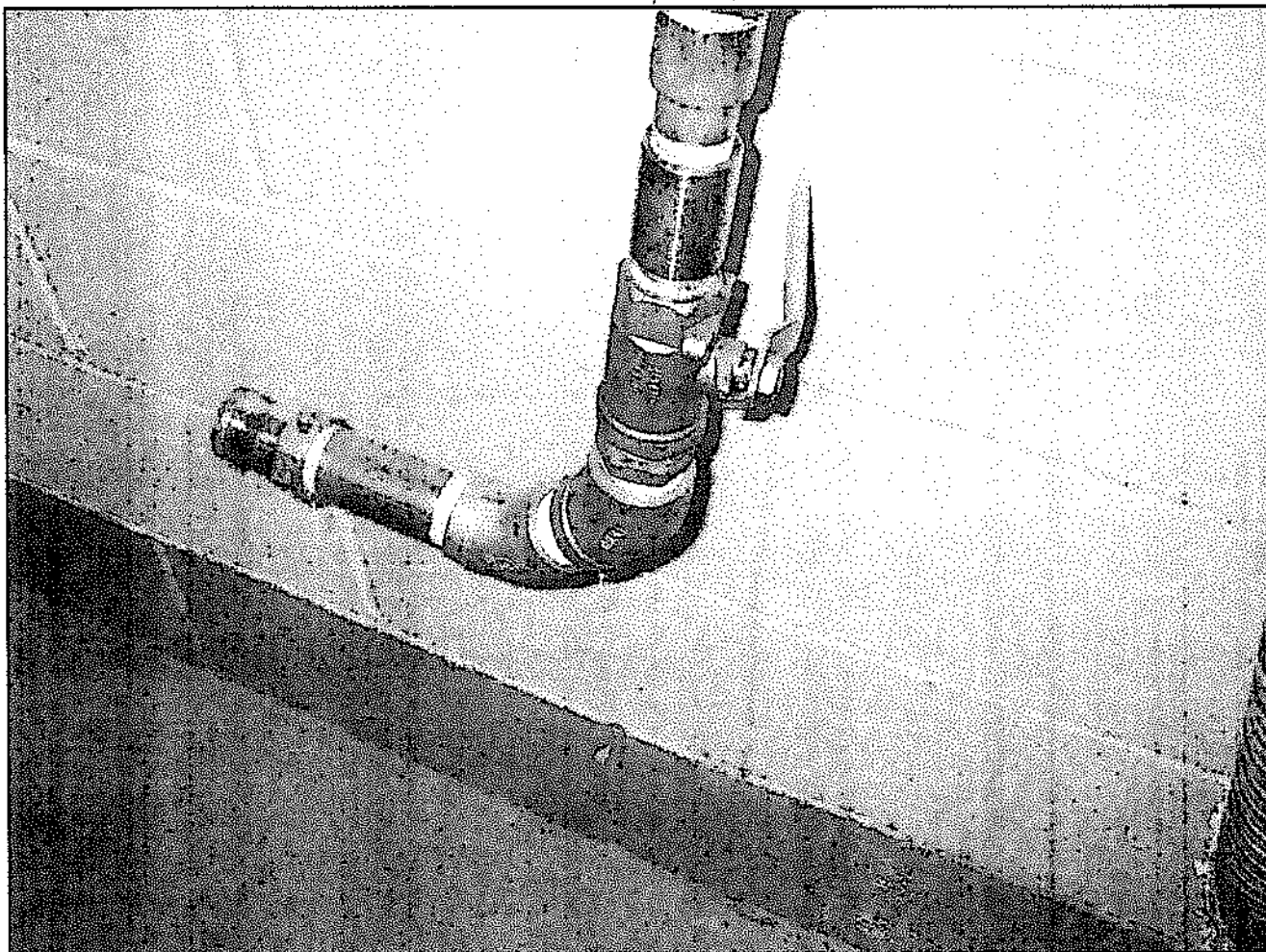


| Attributes         |   |
|--------------------|---|
| Photographer       | A. Ruhs   |
| Original File Name | IMGP0021.JPG  |
| Date/Time          | 6/13/2017 4:53:29 PM  |
| Description        | Valve for air line (not hazardous waste line) at tank HW-101. |

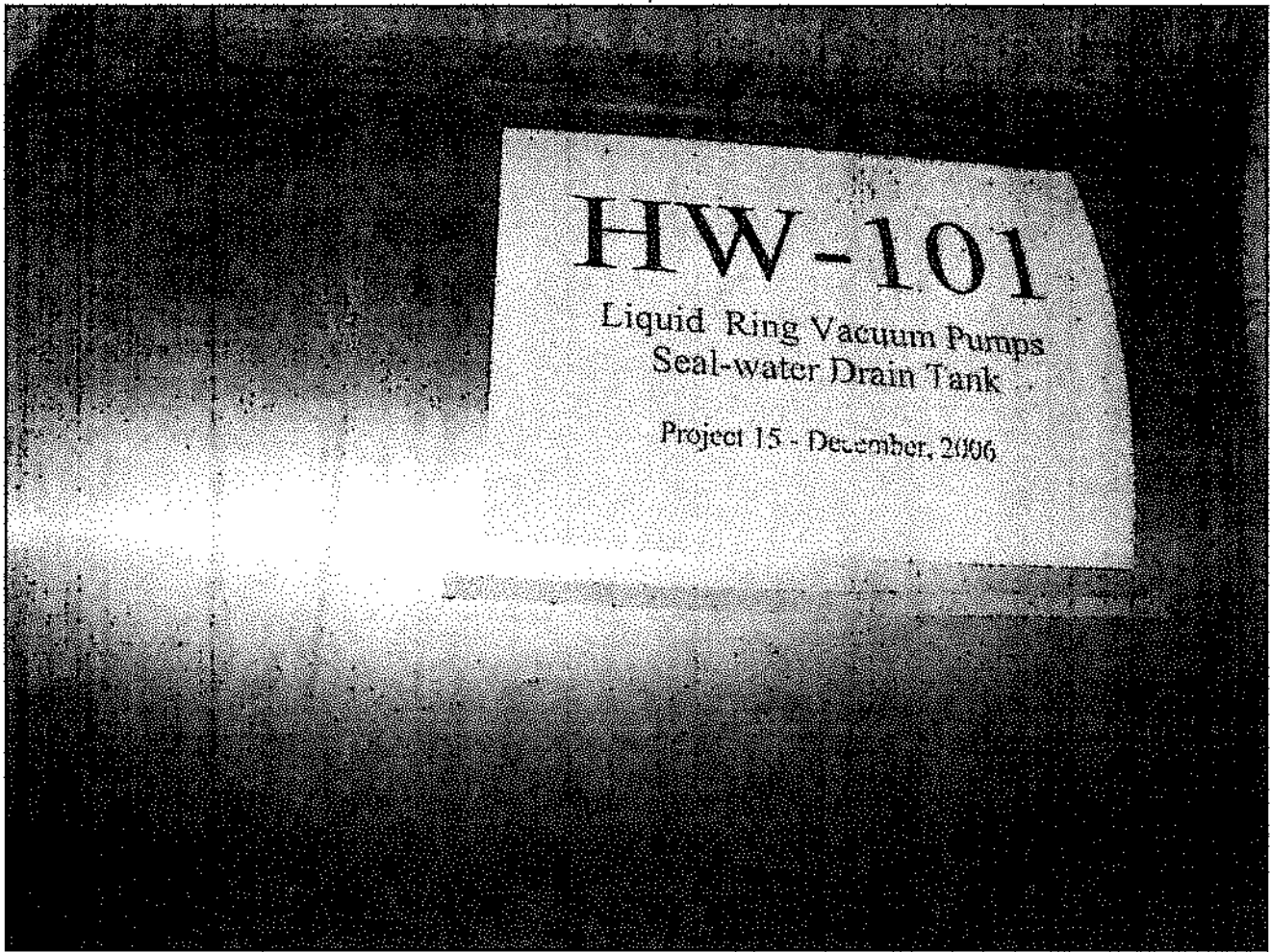


| Attributes         |  |
|--------------------|--|
| Photographer       | A. Ruhs  |
| Original File Name | IMGP0022.JPG                                       |
| Date/Time          | 6/13/2017 4:53:41 PM                               |
| Description        | Valve and hose on discharge line from tank HW-101. |

Title: PCI Synthesis

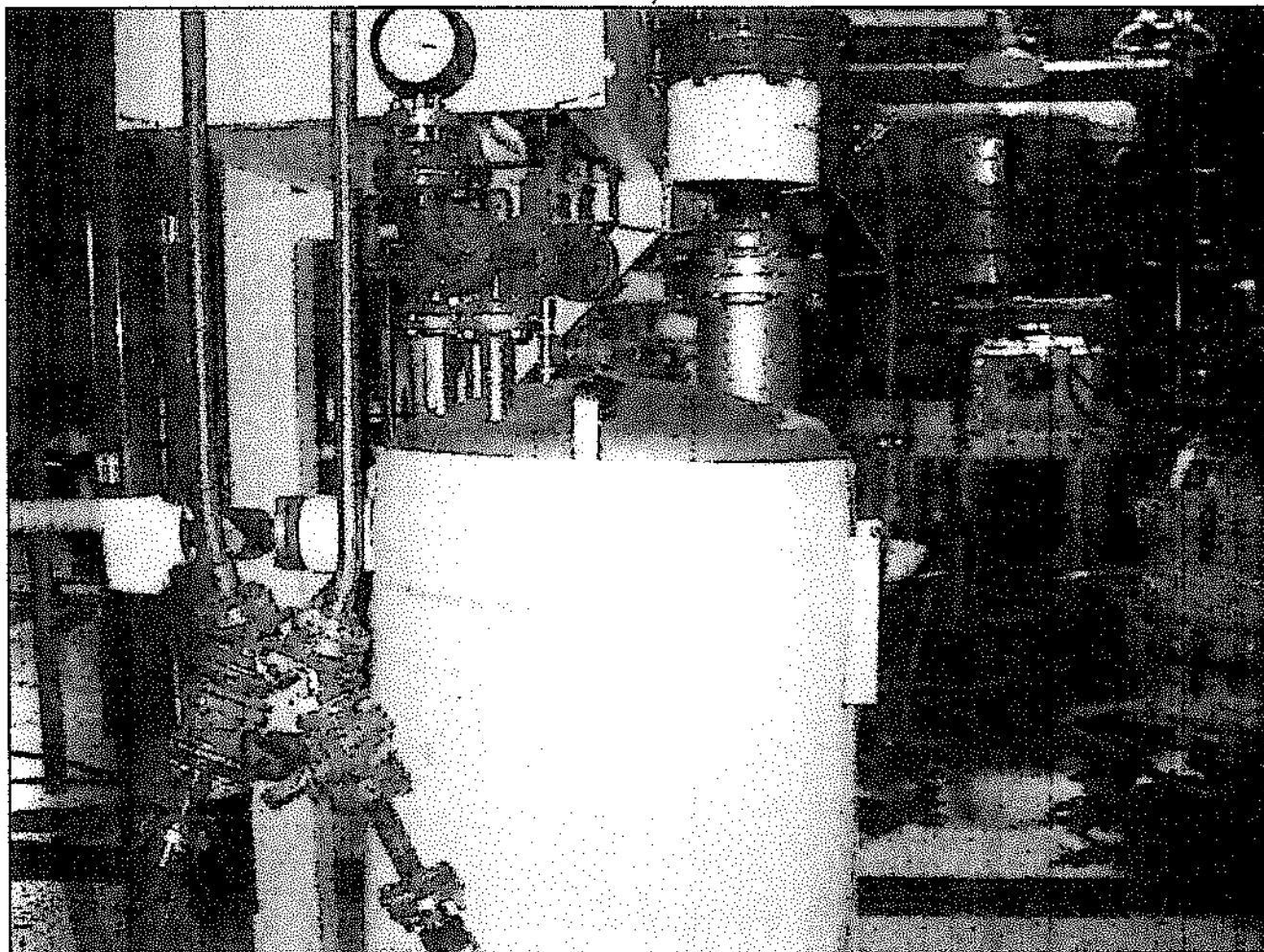


| Attributes         |   |
|--------------------|---|
| Photographer       | A. Ruhs   |
| Original File Name | IMGP0023.JPG                                      |
| Date/Time          | 6/13/2017 4:53:50 PM                              |
| Description        | Another valve on discharge line from tank HW-101. |



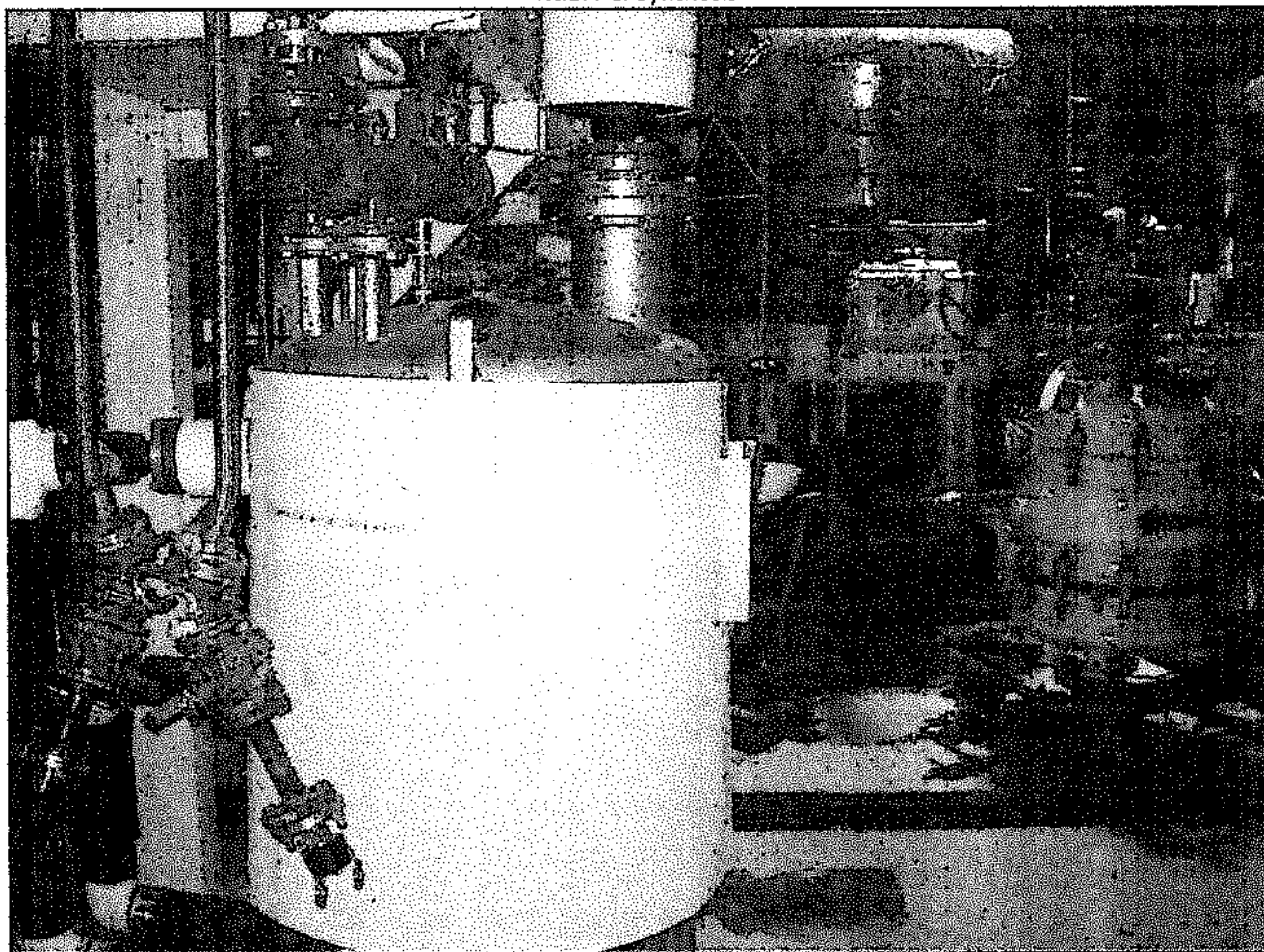
| Attributes         |                                |
|--------------------|--------------------------------|
| Photographer       | A. Ruhs                        |
| Original File Name | IMG0024.JPG                    |
| Date/Time          | 6/13/2017 4:56:02 PM           |
| Description        | Close-up on HW-101 tank label. |

Title: PCI Synthesis



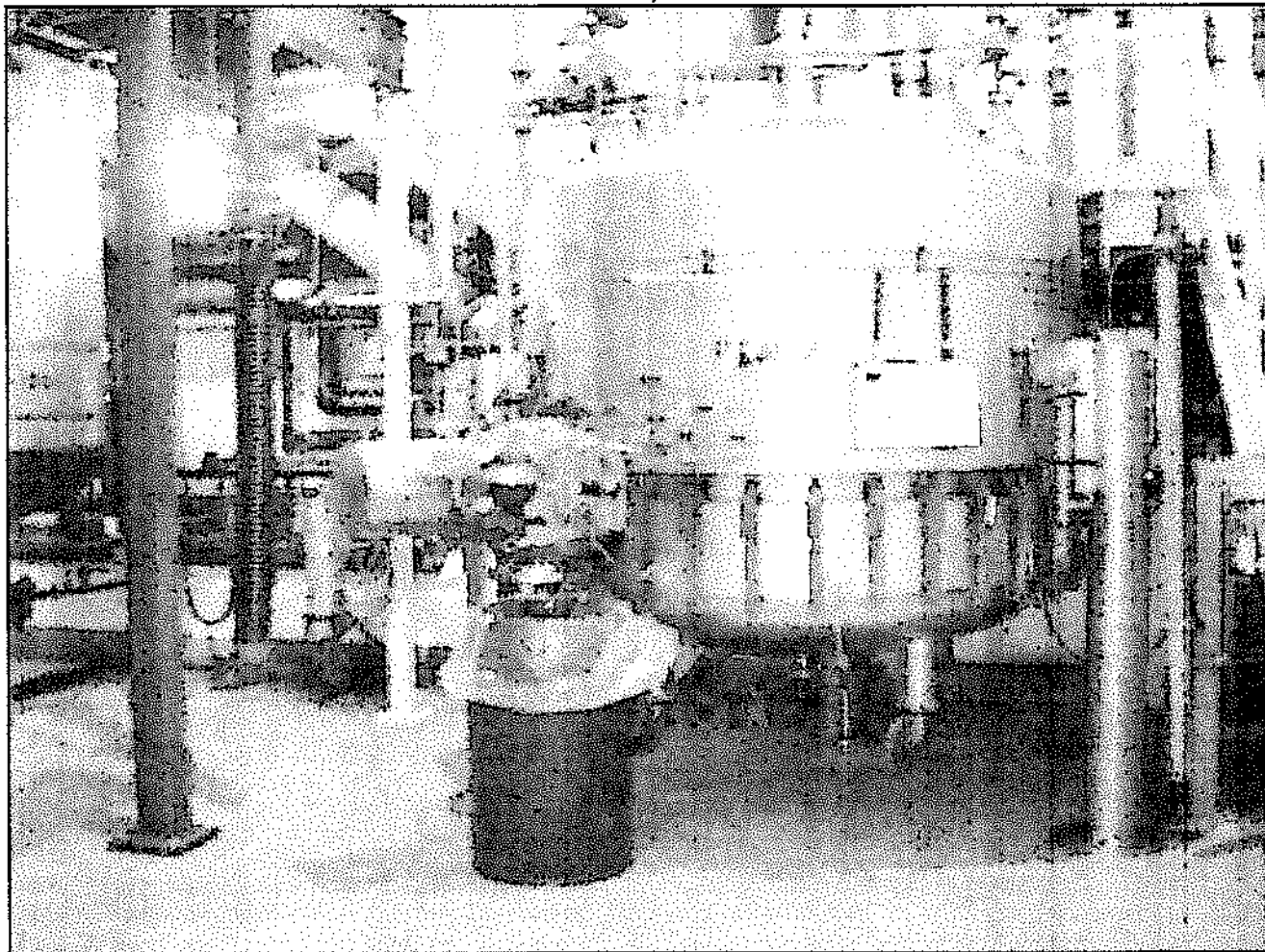
| Attributes         |  |
|--------------------|--|
| Photographer       | A. Ruhs  |
| Original File Name | IMGP0025.JPG   |
| Date/Time          | 6/13/2017 4:56:55 PM   |
| Description        | PFN #1 KOP forground and PFN #1 in background, silver. KOP from condenser. |

Title: PCI Synthesis



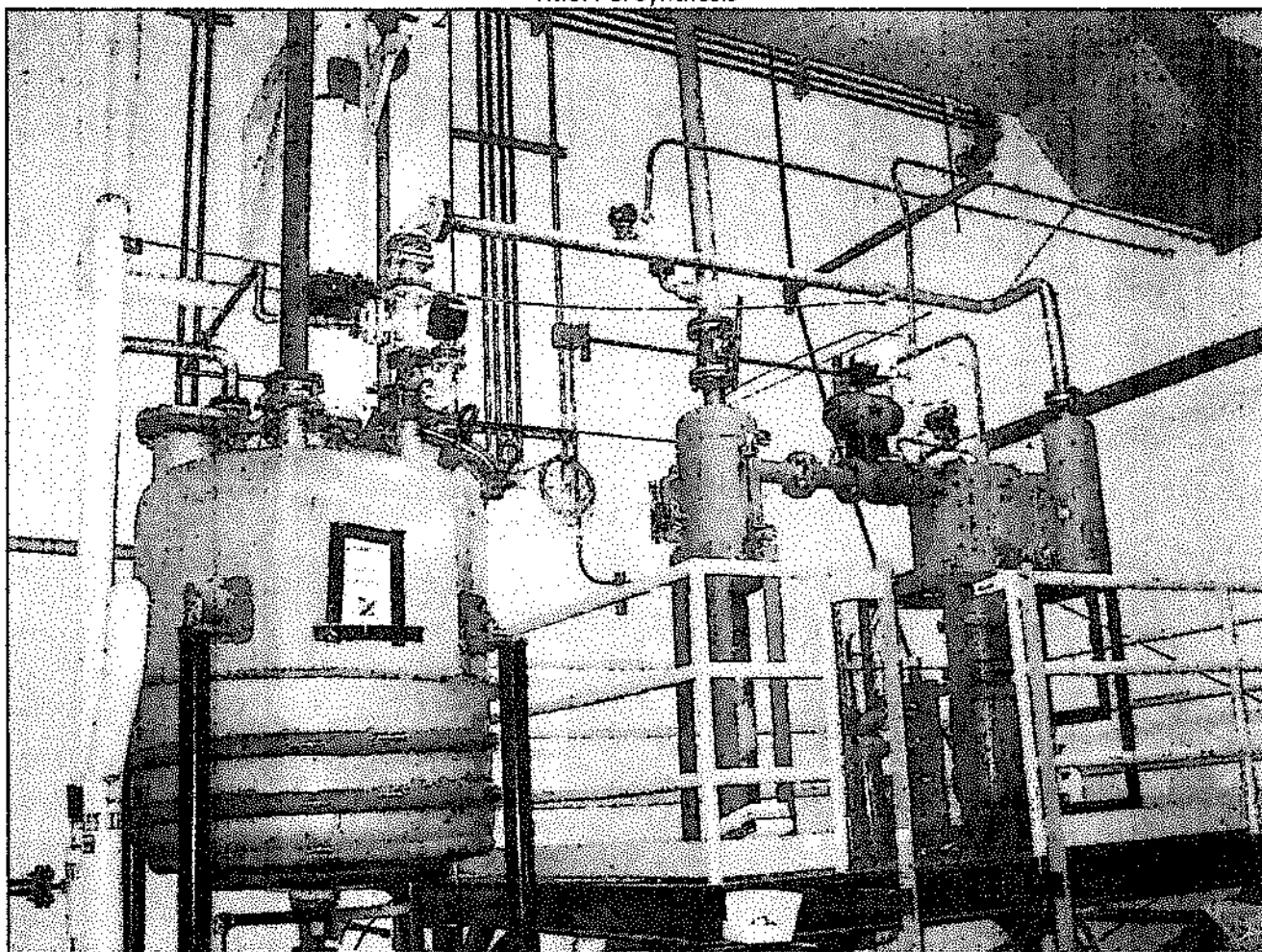
| Attributes         |  |
|--------------------|--|
| Photographer       | A. Ruhs  |
| Original File Name | IMGP0026.JPG   |
| Date/Time          | 6/13/2017 4:57:04 PM   |
| Description        | PFN #1 KOP forground and PFN #1 in background, silver. KOP from condenser. |

Title: PCI Synthesis



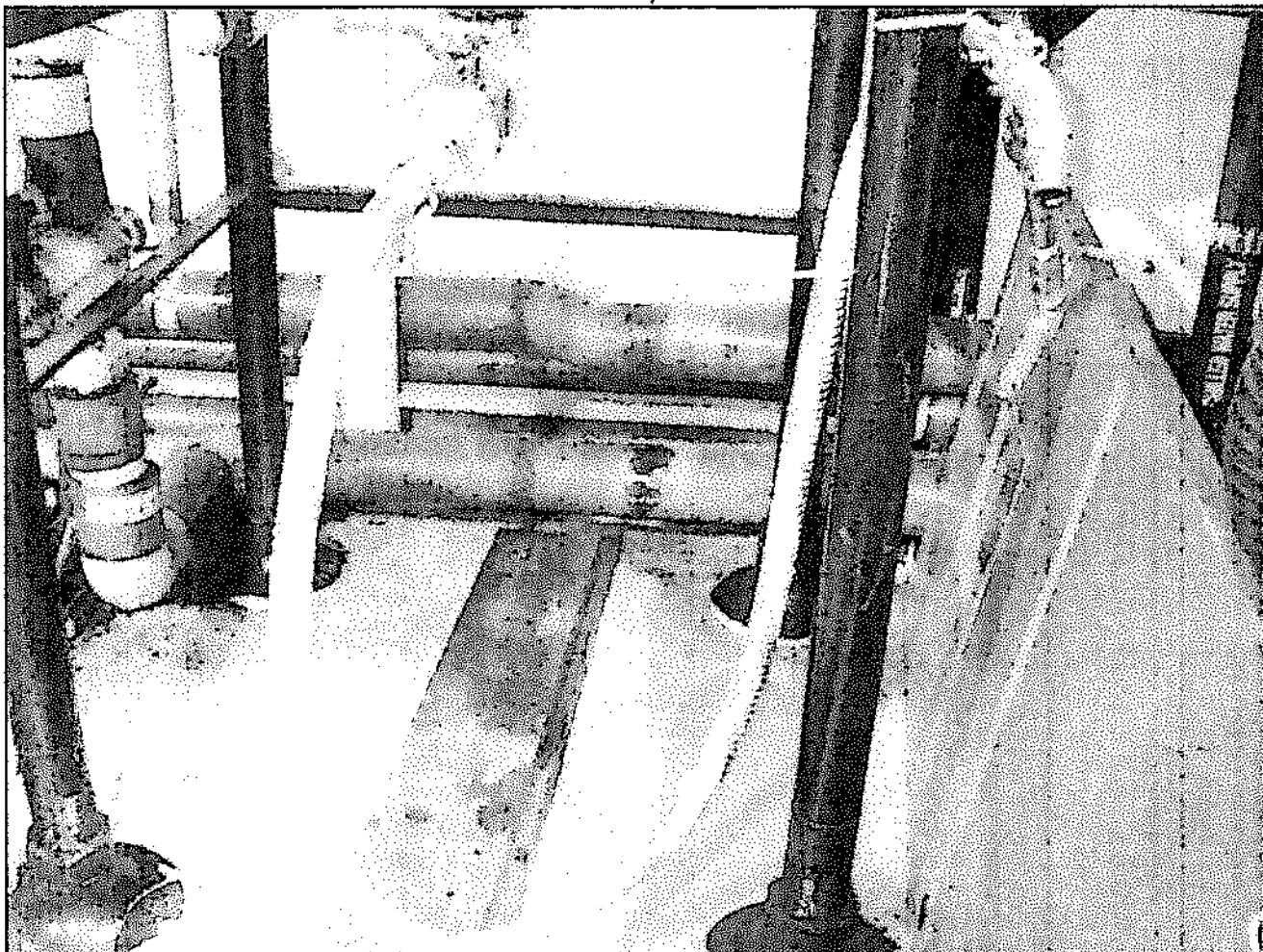
| Attributes         |                                   |
|--------------------|-----------------------------------|
| Photographer       | A. Ruhs                           |
| Original File Name | IMGP0027.JPG                      |
| Date/Time          | 6/13/2017 4:59:05 PM              |
| Description        | Hastelloy area - PFN #2 (blurry). |

Title: PCI Synthesis

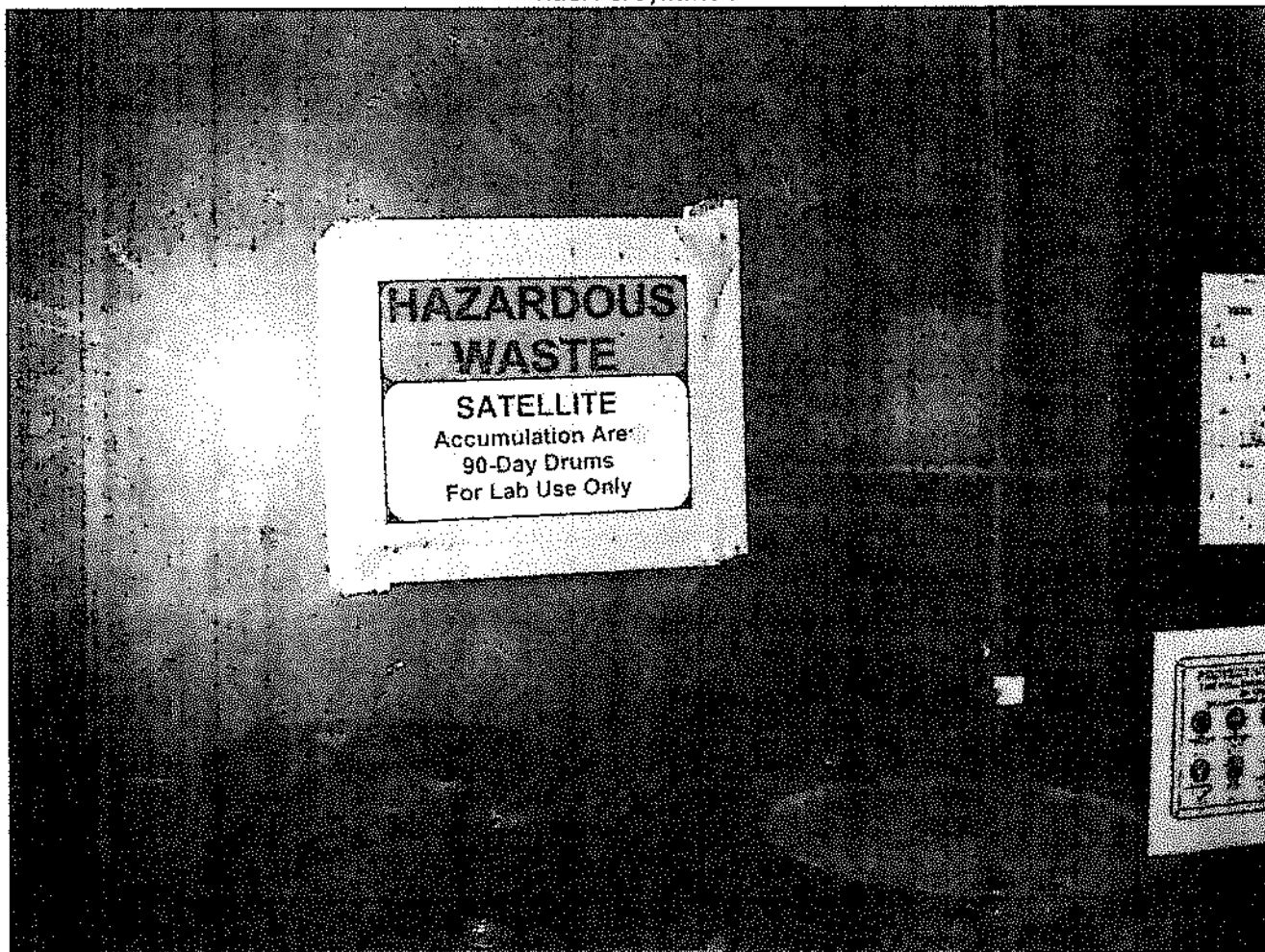


| Attributes         |   |
|--------------------|---|
| Photographer       | A. Ruhs   |
| Original File Name | IMGP0028.JPG  |
| Date/Time          | 6/13/2017 5:01:20 PM  |
| Description        | Edwards #3 pump, condenser, and KOP specifically for PFN #2. KOP approximately 300 gallons. |

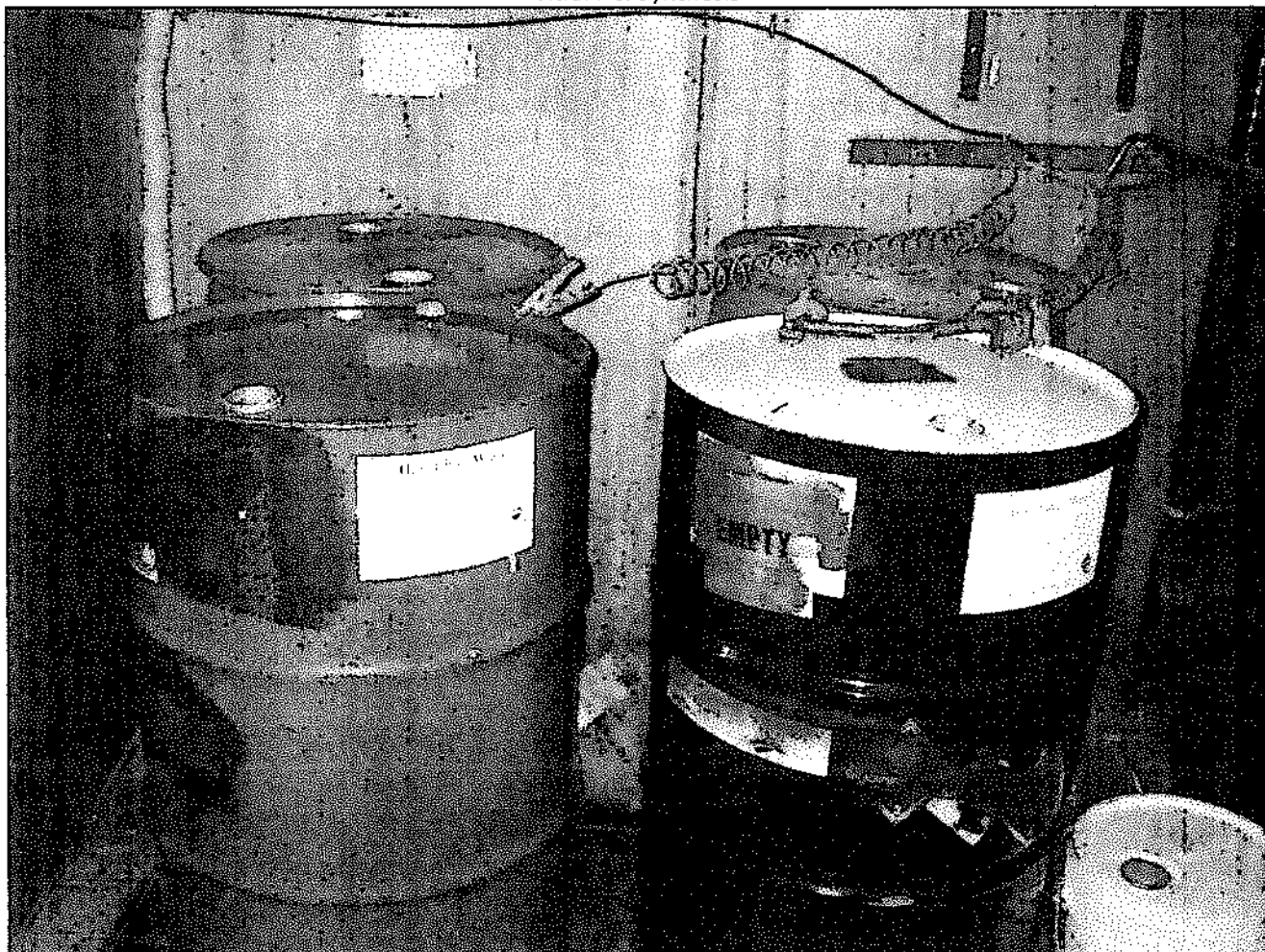
Title: PCI Synthesis



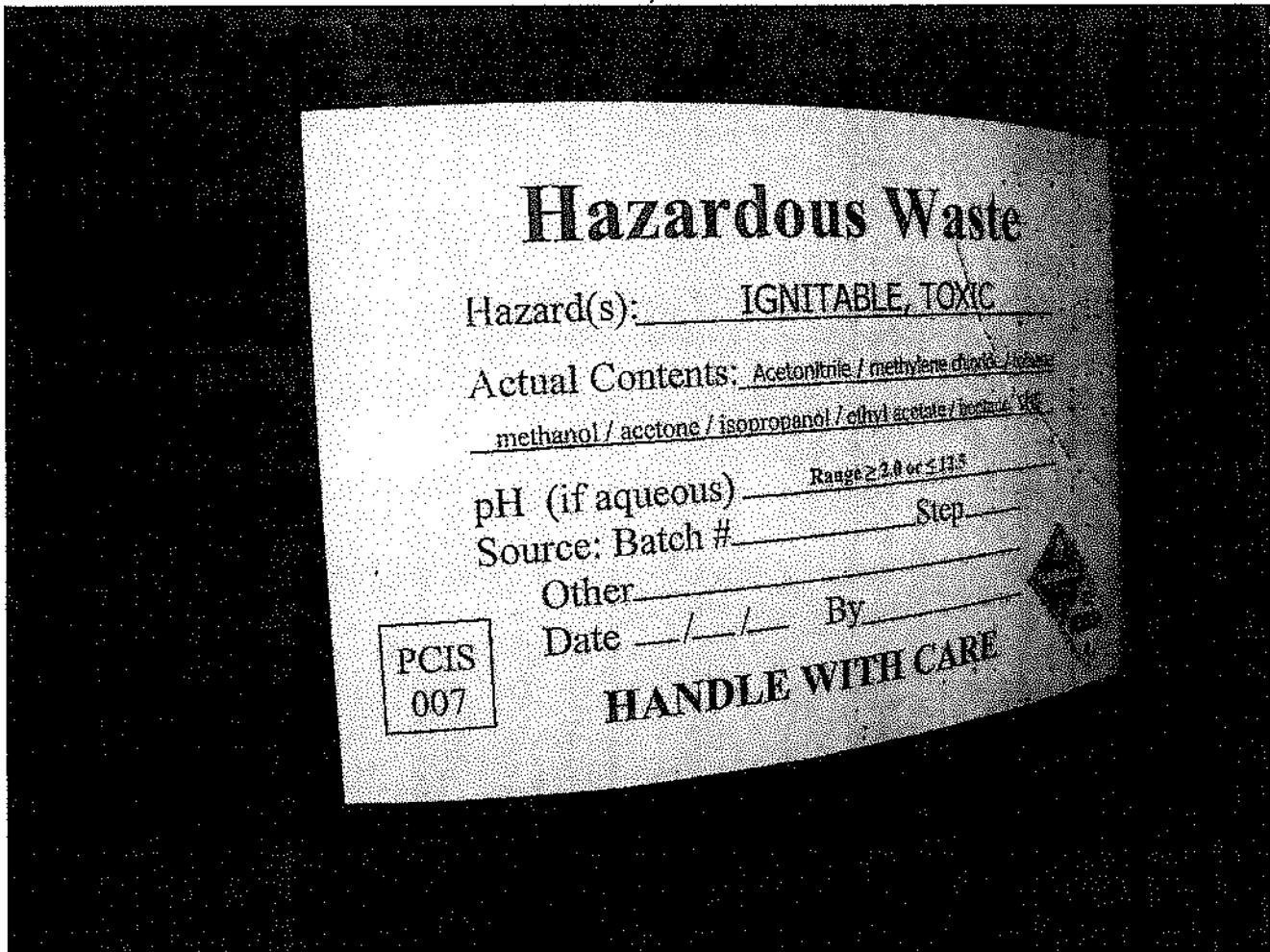
| Attributes         |  |
|--------------------|--|
| Photographer       | A. Ruhs  |
| Original File Name | IMG0029.JPG  |
| Date/Time          | 6/13/2017 5:03:40 PM   |
| Description        | Close-up on KOP open ended discharge line for Edwards #3 pump. |



| Attributes         |   |
|--------------------|---|
| Photographer       | A. Ruhs   |
| Original File Name | IMGP0030.JPG  |
| Date/Time          | 6/13/2017 5:08:53 PM  |
| Description        | 90-day accumulation area near Edwards #3, PFN-2.<br>Collection for lab waste. |



| Attributes         |  |
|--------------------|--|
| Photographer       | A. Ruhs  |
| Original File Name | IMGP0031.JPG   |
| Date/Time          | 6/13/2017 5:09:22 PM   |
| Description        | 90-day accumulation area near Edwards #3, PFN-2.<br>Four drums inside. |



| Attributes         |   |
|--------------------|---|
| Photographer       | A. Ruhs   |
| Original File Name | IMGP0032.JPG  |
| Date/Time          | 6/13/2017 5:09:33 PM  |
| Description        | Close-up on label on right drum from photo #31, located in 90-day accumulation area near Edwards #3, PFN-2. Collection for lab waste. |

Title: PCI Synthesis

## Hazardous Waste

Hazard(s): IGNITABLE, TOXIC

Actual Contents: acetone / methylene chloride / toluene  
methanol / acetone / isopropyl alcohol / acetate / heptane / THF

pH (if aqueous) 2.0 or ≤ 12.5

Source: Batch #                      Step                     

Other                     

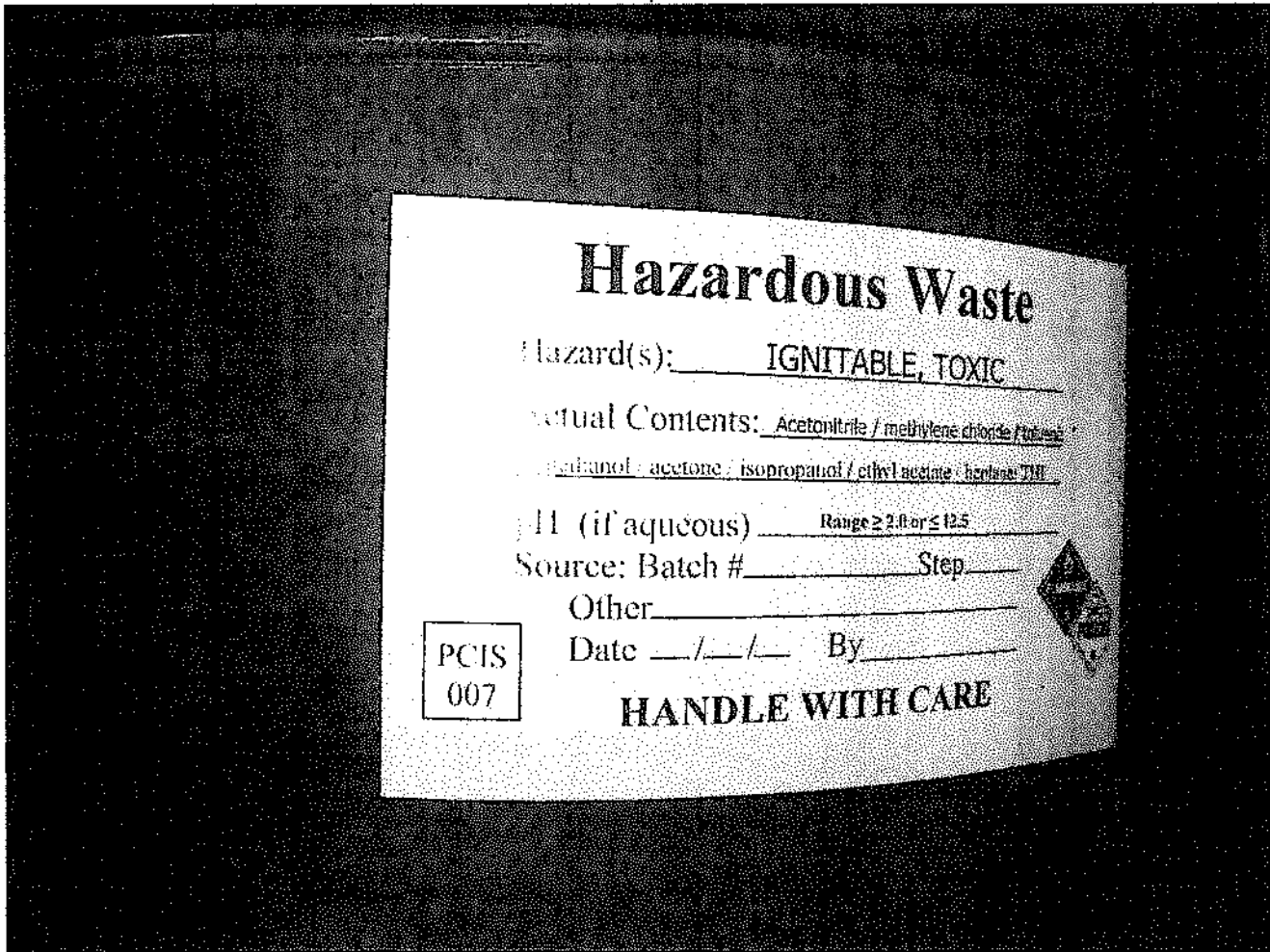
Date      /      /     

PCIS  
007



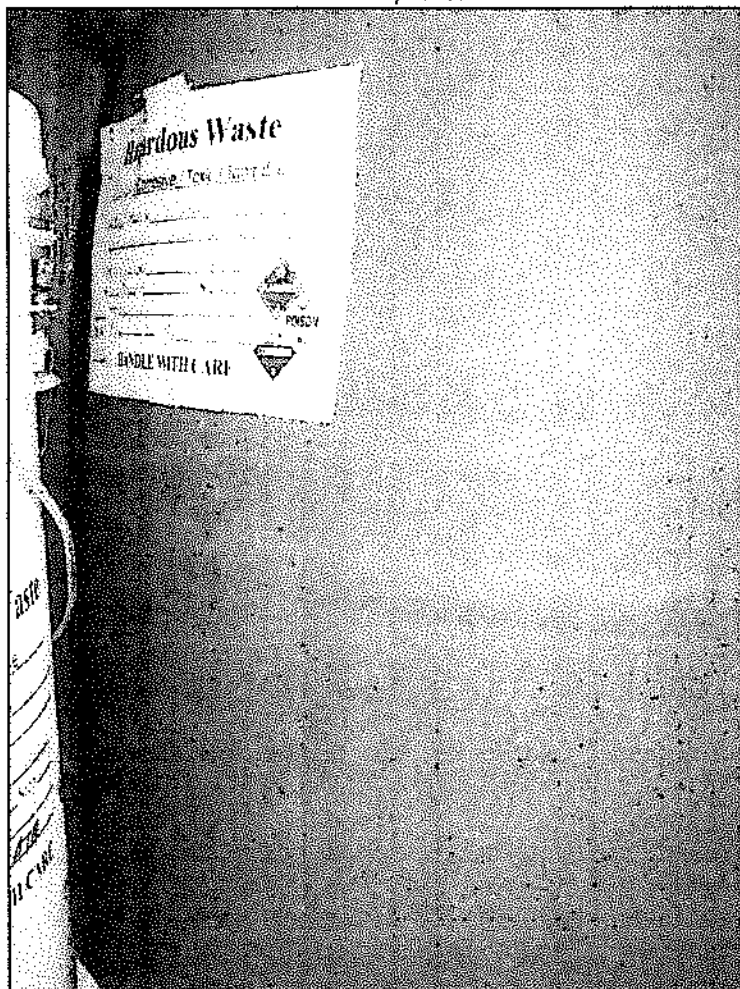
**HANDLE WITH CARE**

| Attributes         |  |
|--------------------|--|
| Photographer       | A. Ruhs  |
| Original File Name | IMGP0033.JPG   |
| Date/Time          | 6/13/2017 5:09:42 PM   |
| Description        | Close-up on label on left drum (green) from photo #31, located in 90-day accumulation area near Edwards #3, PFN-2. Collection for lab waste. |



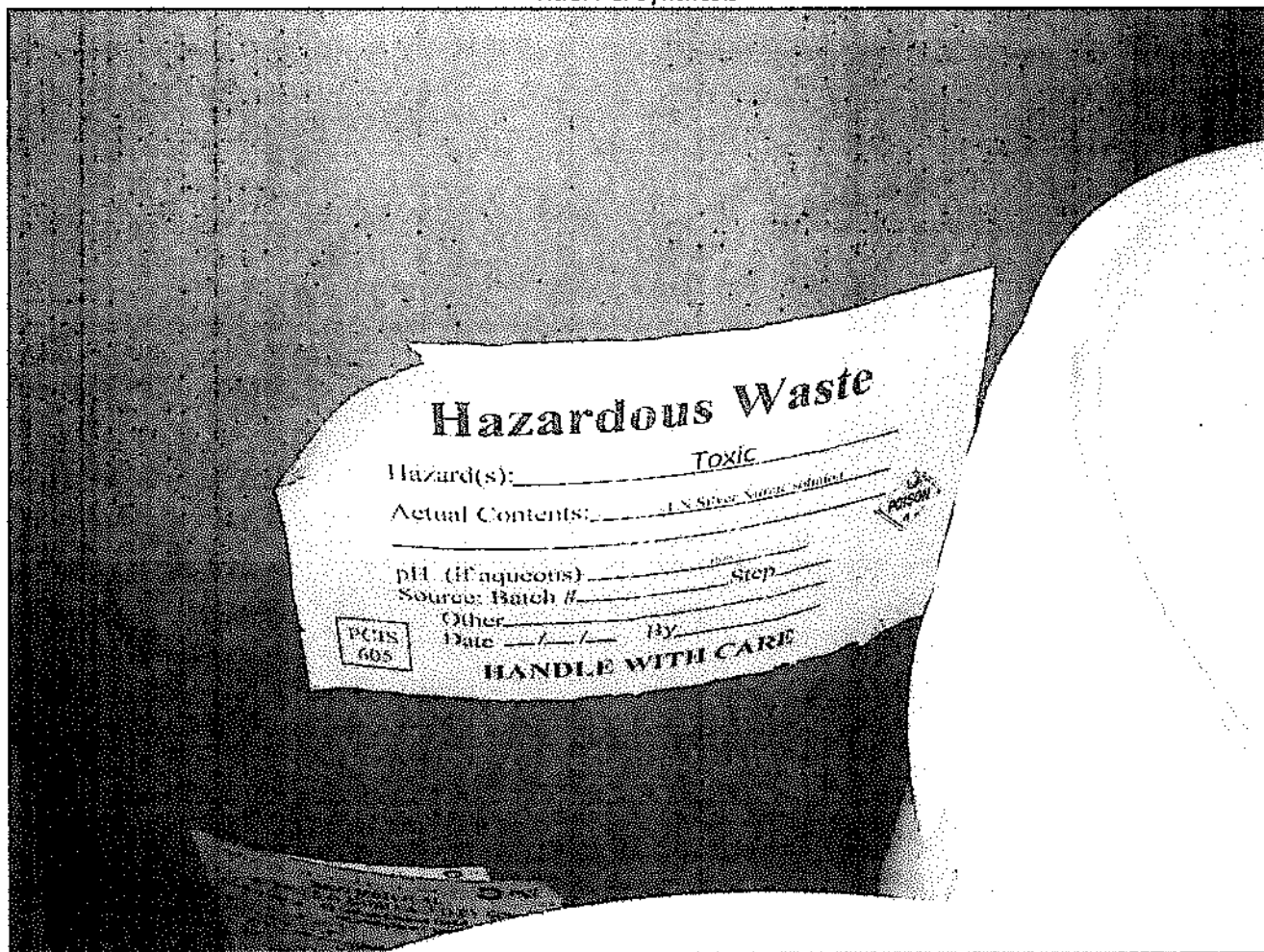
| Attributes         |  |
|--------------------|--|
| Photographer       | A. Ruhs  |
| Original File Name | IMGP0034.JPG   |
| Date/Time          | 6/13/2017 5:09:50 PM   |
| Description        | Close-up on label on left drum (green) from photo #31, located in 90-day accumulation area near Edwards #3, PFN-2. Collection for lab waste. |

Title: PCI Synthesis



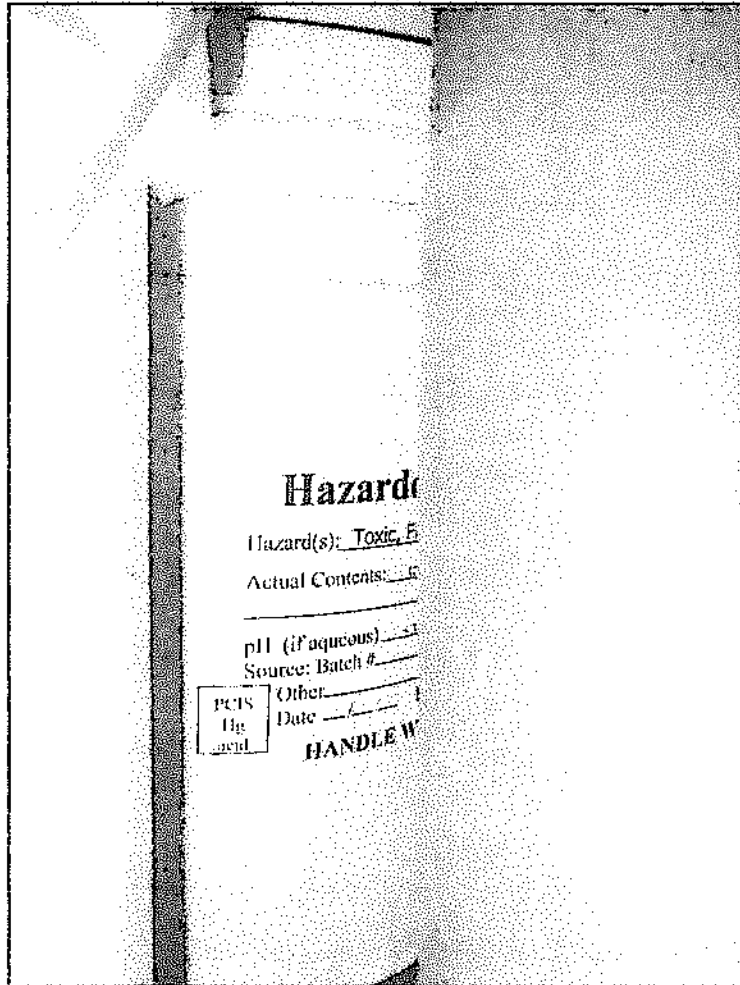
| Attributes         |   |
|--------------------|---|
| Photographer       | A. Ruhs   |
| Original File Name | IMGP0035.JPG  |
| Date/Time          | 6/13/2017 5:13:30 PM  |
| Description        | Close-up on label on blue drum located next to the 90-day accumulation area near Edwards #3, PFN-2. Collection for lab waste. Also not dated. |

Title: PCI Synthesis

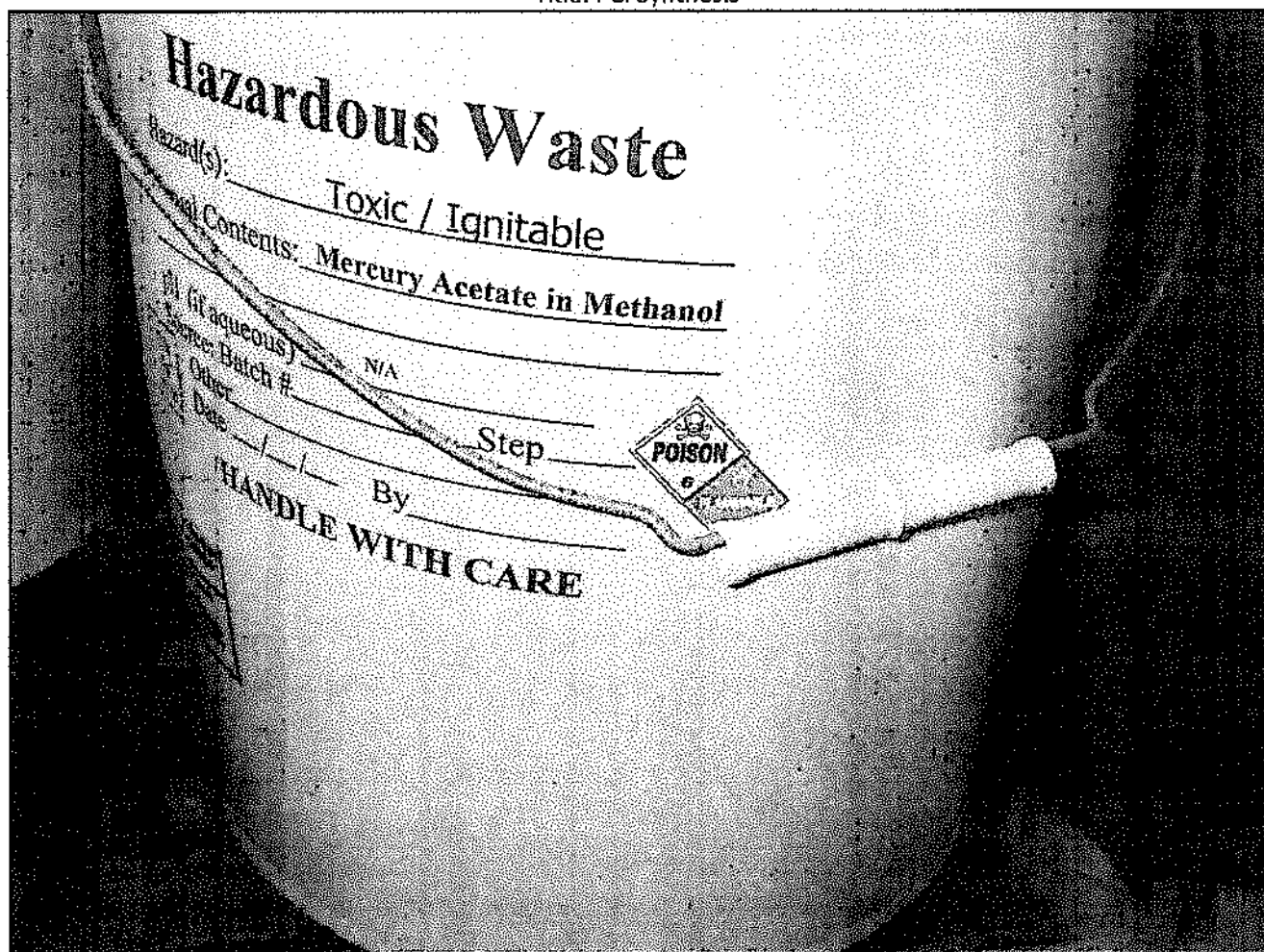


| Attributes         |  |
|--------------------|--|
| Photographer       | A. Ruhs  |
| Original File Name | IMGP0036.JPG   |
| Date/Time          | 6/13/2017 5:13:52 PM   |
| Description        | Close-up on label on second blue drum located next to the 90-day accumulation area near Edwards #3, PFN-2. Collection for lab waste. Also not dated. |

Title: PCI Synthesis

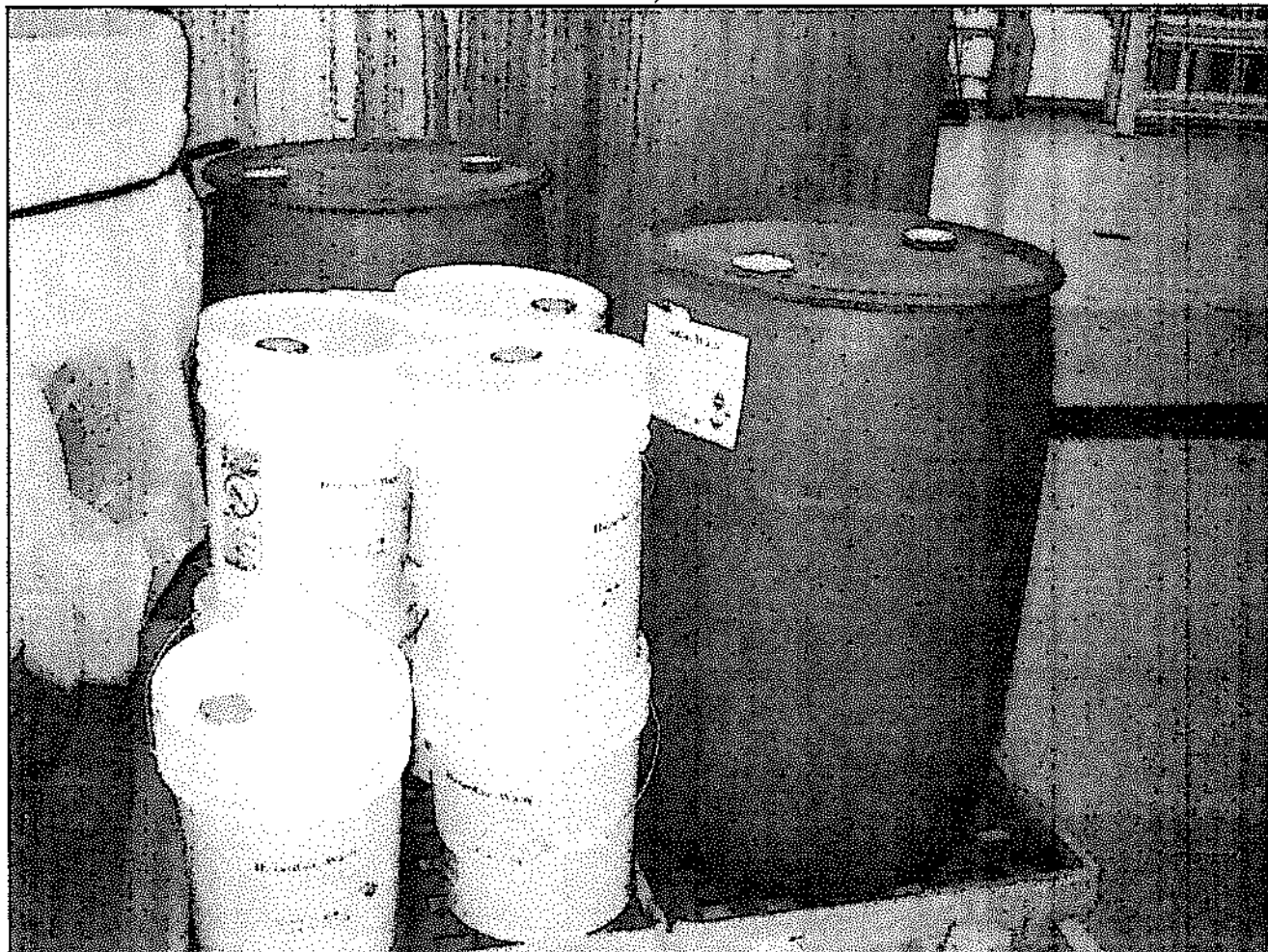


| Attributes         |  |
|--------------------|--|
| Photographer       | A. Ruhs                                  |
| Original File Name | IMGP0037.JPG                             |
| Date/Time          | 6/13/2017 5:14:16 PM                     |
| Description        | 5-gallon hazardous waste drum not dated. |



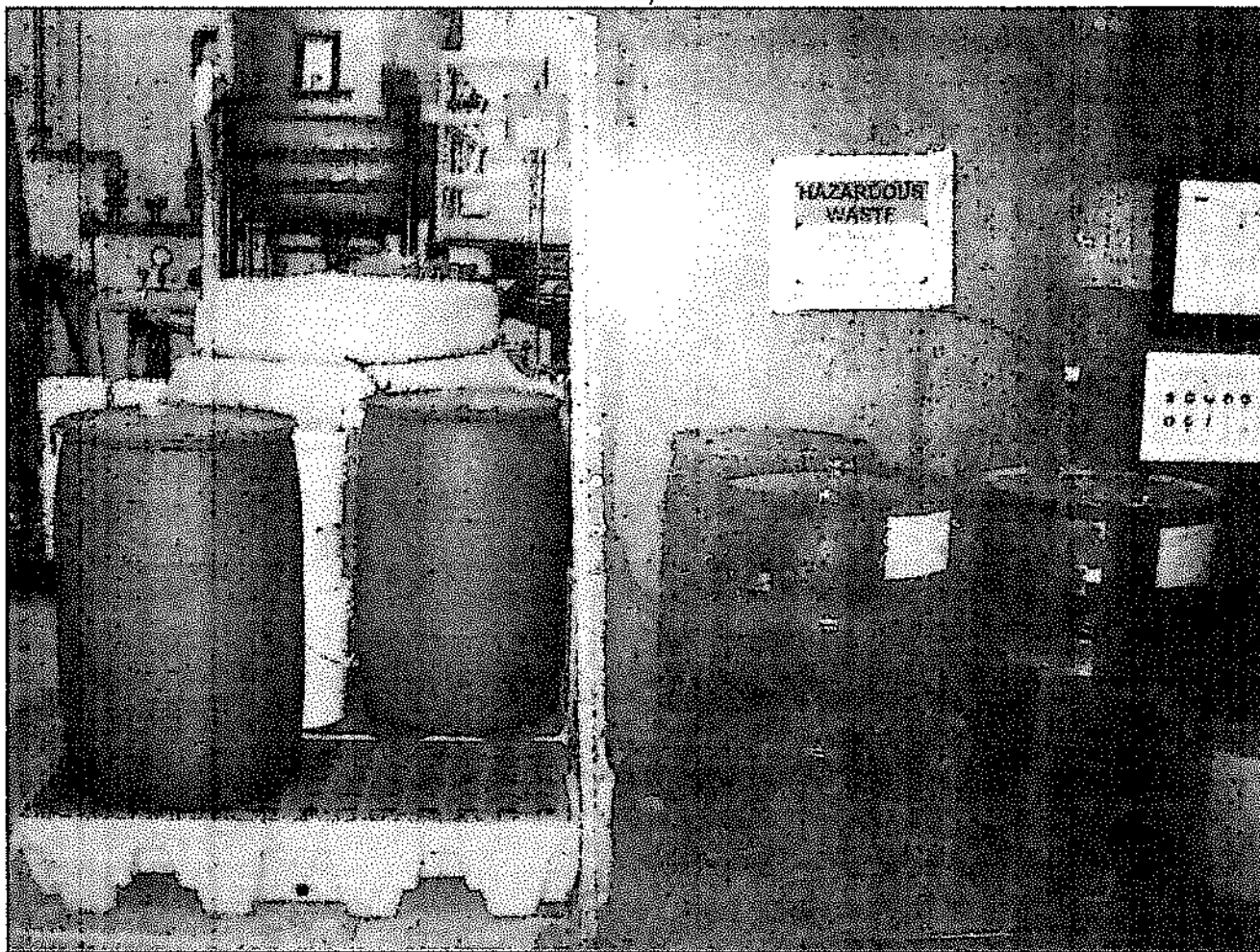
| Attributes         |   |
|--------------------|---|
| Photographer       | A. Ruhs   |
| Original File Name | IMGP0038.JPG                                    |
| Date/Time          | 6/13/2017 5:14:28 PM                            |
| Description        | Second 5-gallon hazardous waste drum not dated. |

Title: PCI Synthesis



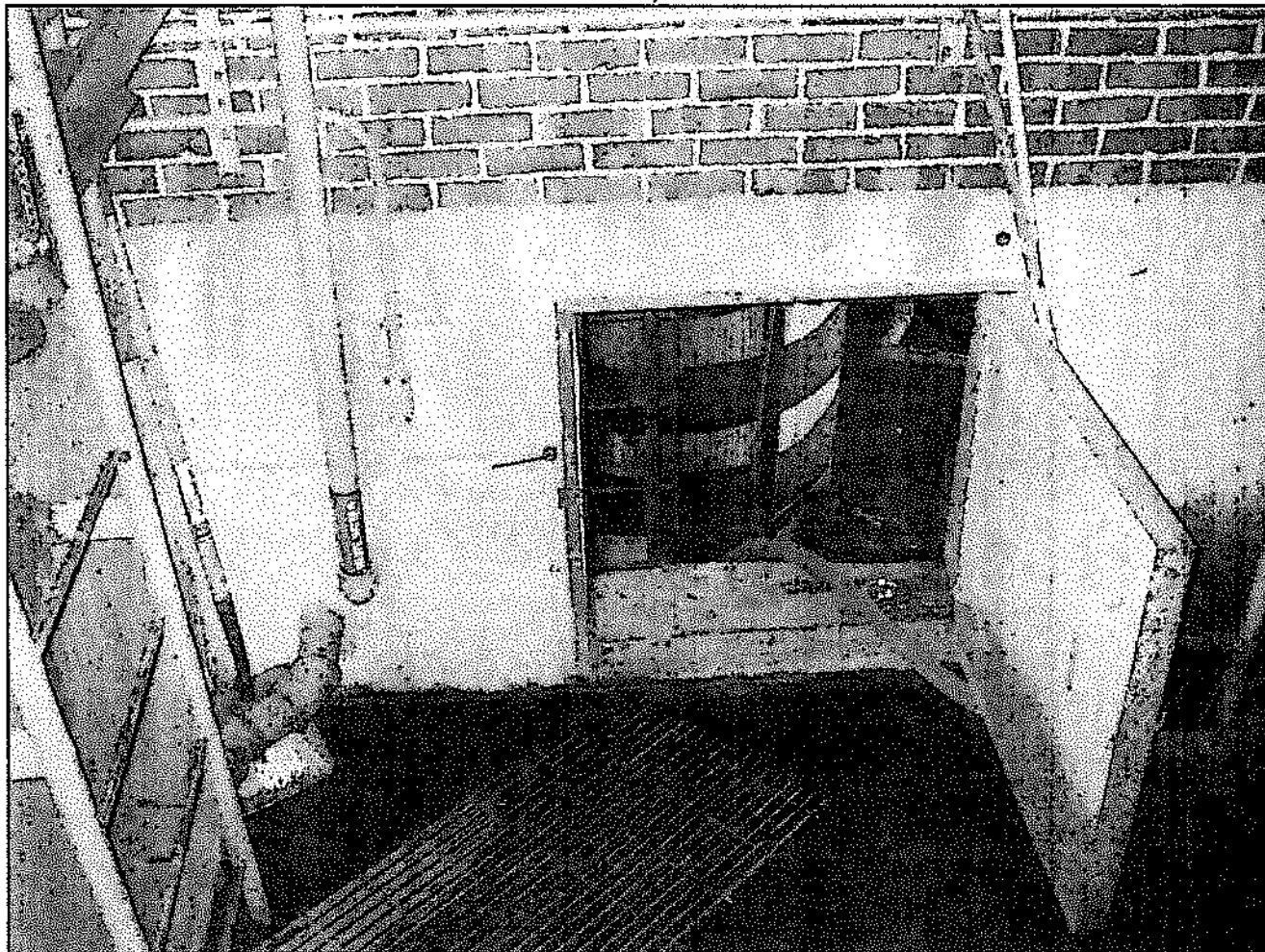
| Attributes         |  |
|--------------------|--|
| Photographer       | A. Ruhs  |
| Original File Name | IMGP0039.JPG   |
| Date/Time          | 6/13/2017 5:14:42 PM   |
| Description        | Overview shot of hazardous waste drums staged outside of the 90-day accumulation shed near PFN #2 and Edwards #3 pump system area. |

Title: PCI Synthesis



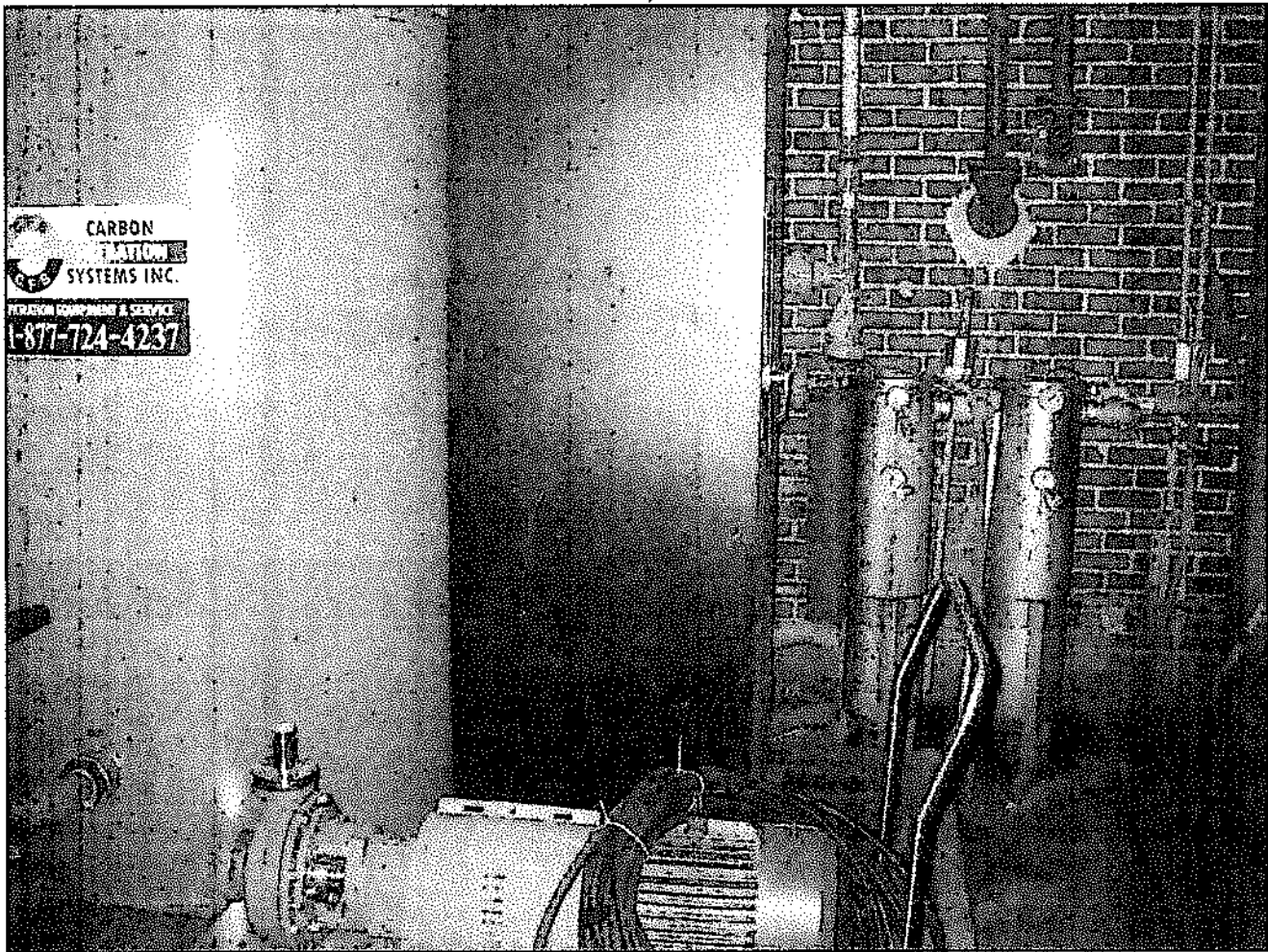
| Attributes         |  |
|--------------------|--|
| Photographer       | A. Ruhs  |
| Original File Name | IMGP0040.JPG   |
| Date/Time          | 6/13/2017 5:14:58 PM   |
| Description        | Overview shot all hazardous waste at or near the 90-day accumulation shed near PFN #2 and Edwards #3 pump system area. |

Title: PCI Synthesis



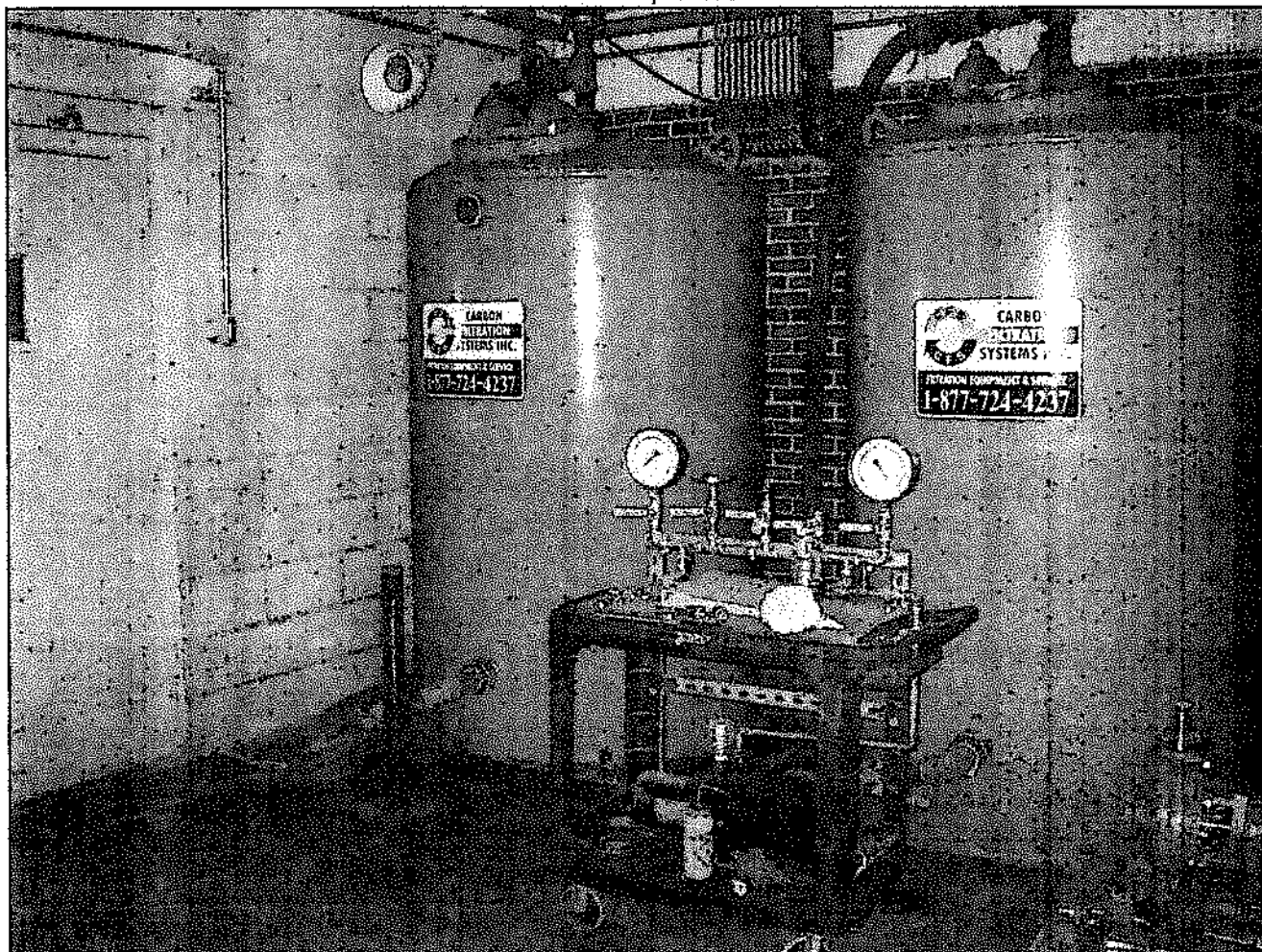
| Attributes         |   |
|--------------------|---|
| Photographer       | A. Ruhs   |
| Original File Name | IMGP0041.JPG  |
| Date/Time          | 6/13/2017 5:23:15 PM                                    |
| Description        | Pit Tank inside sump, near tank T-5000 (inside window). |

Title: PCI Synthesis

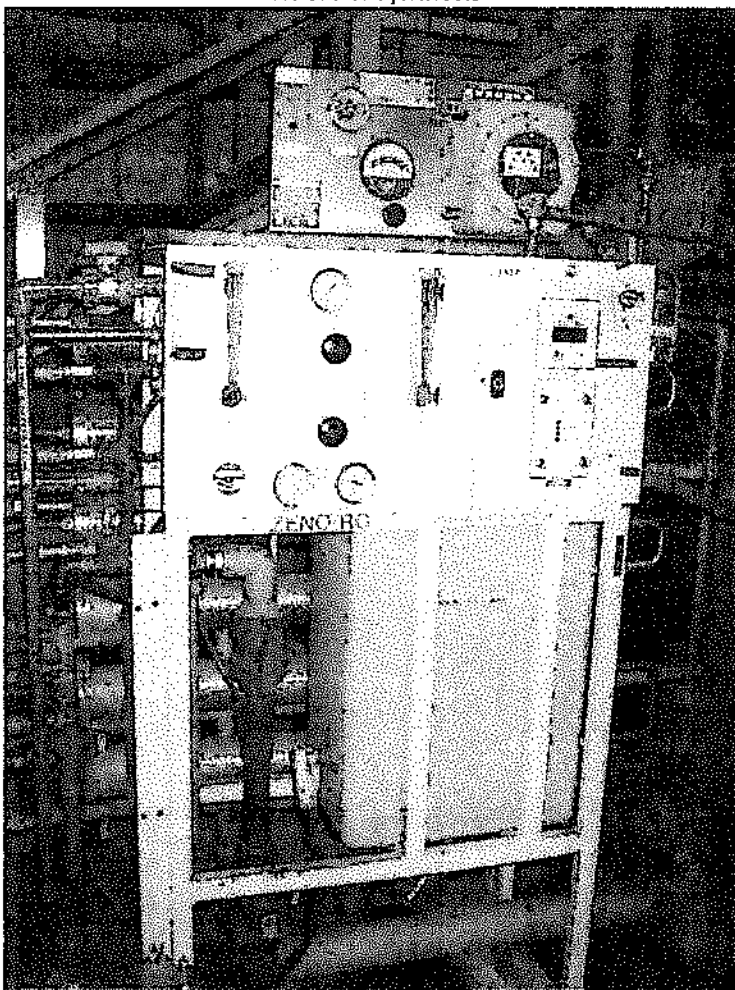


| Attributes         |   |
|--------------------|---|
| Photographer       | A. Ruhs   |
| Original File Name | IMG0042.JPG   |
| Date/Time          | 6/13/2017 5:23:44 PM  |
| Description        | Strainer filters from discharge of pit tank. Left side are carbon filter beds (blue). |

Title: PCI Synthesis

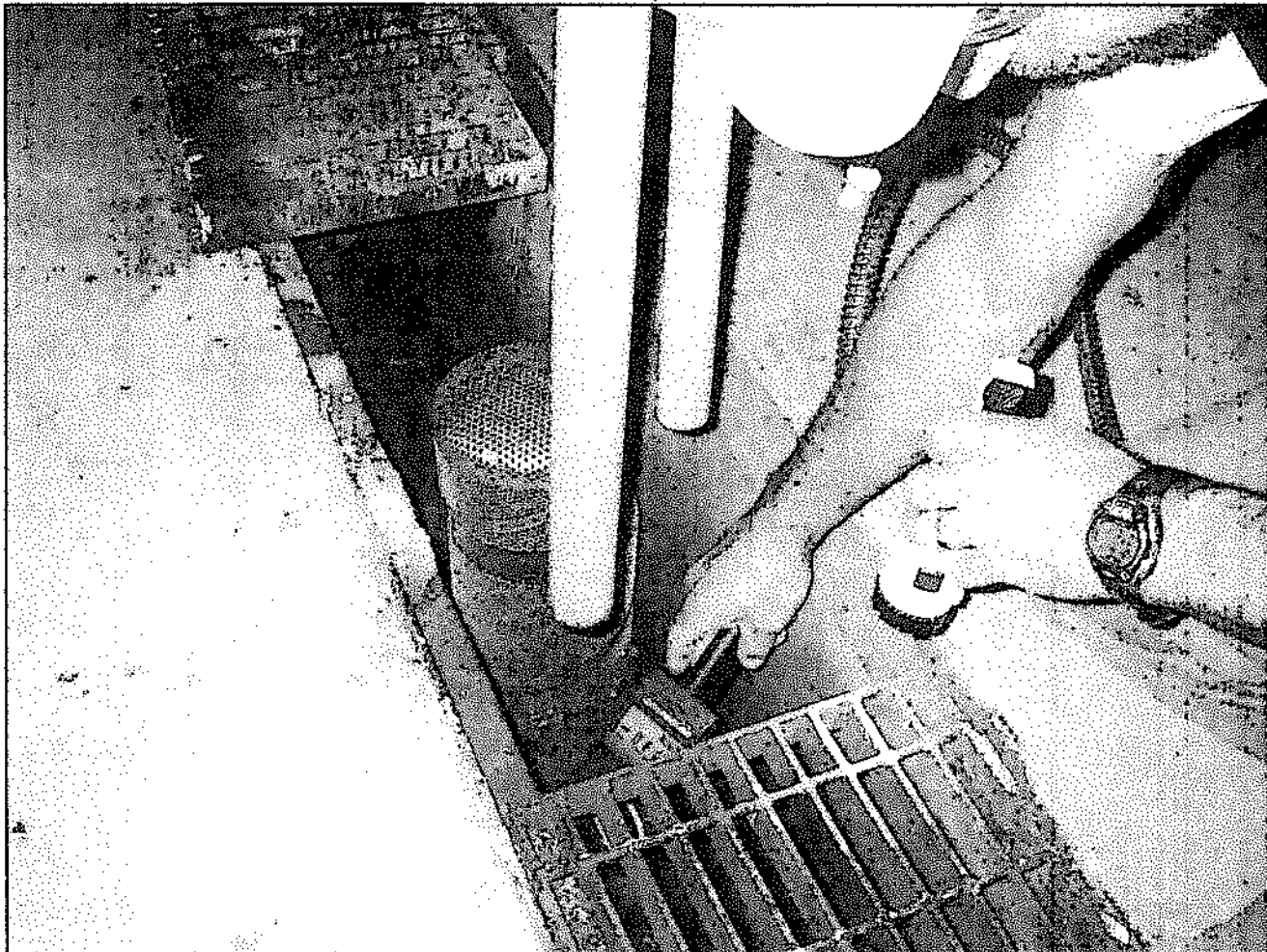


| Attributes         |   |
|--------------------|---|
| Photographer       | A. Ruhs   |
| Original File Name | IMGP0043.JPG                                    |
| Date/Time          | 6/13/2017 5:23:57 PM                            |
| Description        | Carbon filter beds for discharge from pit tank. |



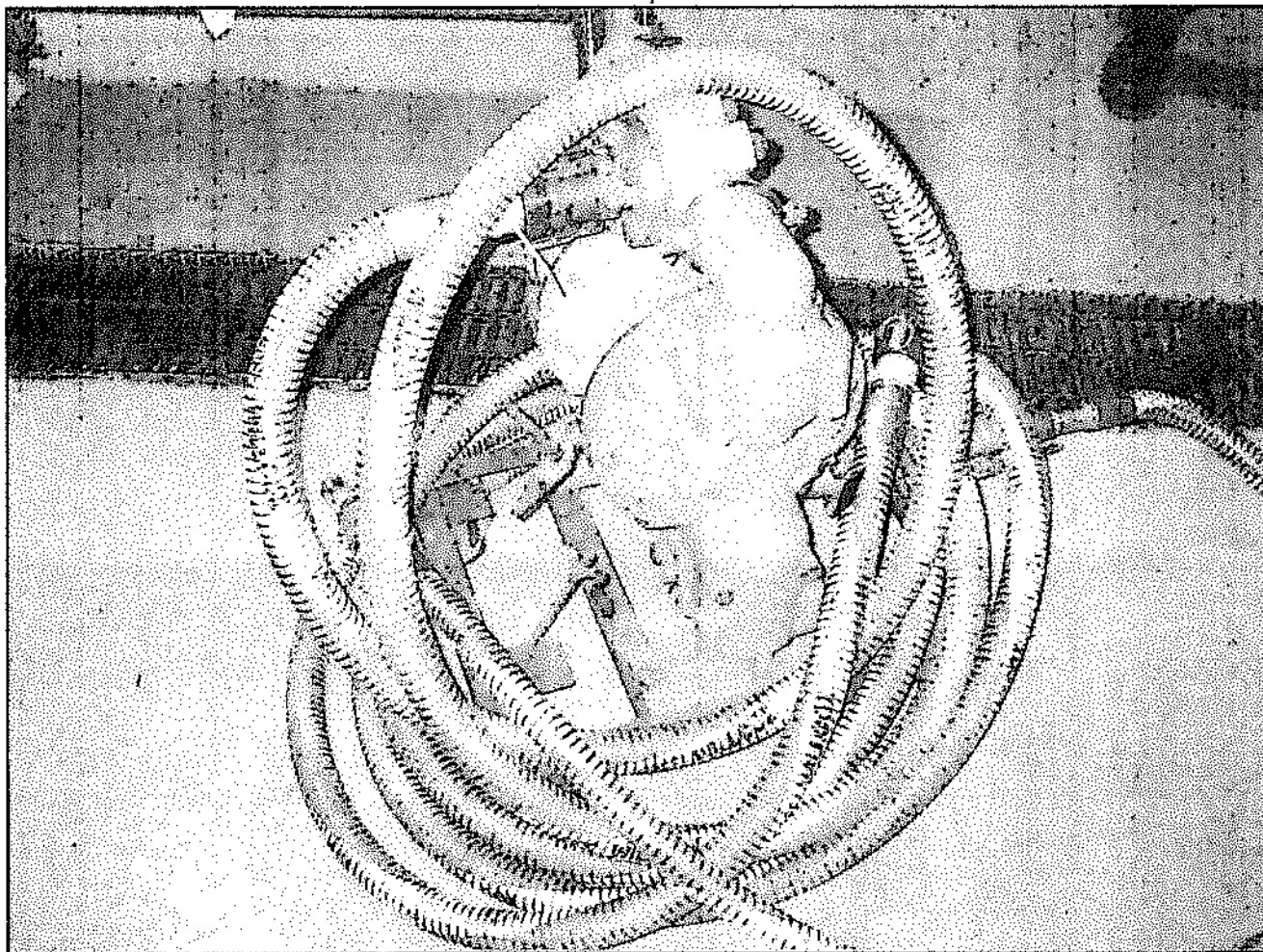
| Attributes         |                                   |
|--------------------|-----------------------------------|
| Photographer       | A. Ruhs                           |
| Original File Name | IMGP0044.JPG                      |
| Date/Time          | 6/13/2017 5:24:11 PM              |
| Description        | Glycol recovery system equipment. |

Title: PCI Synthesis

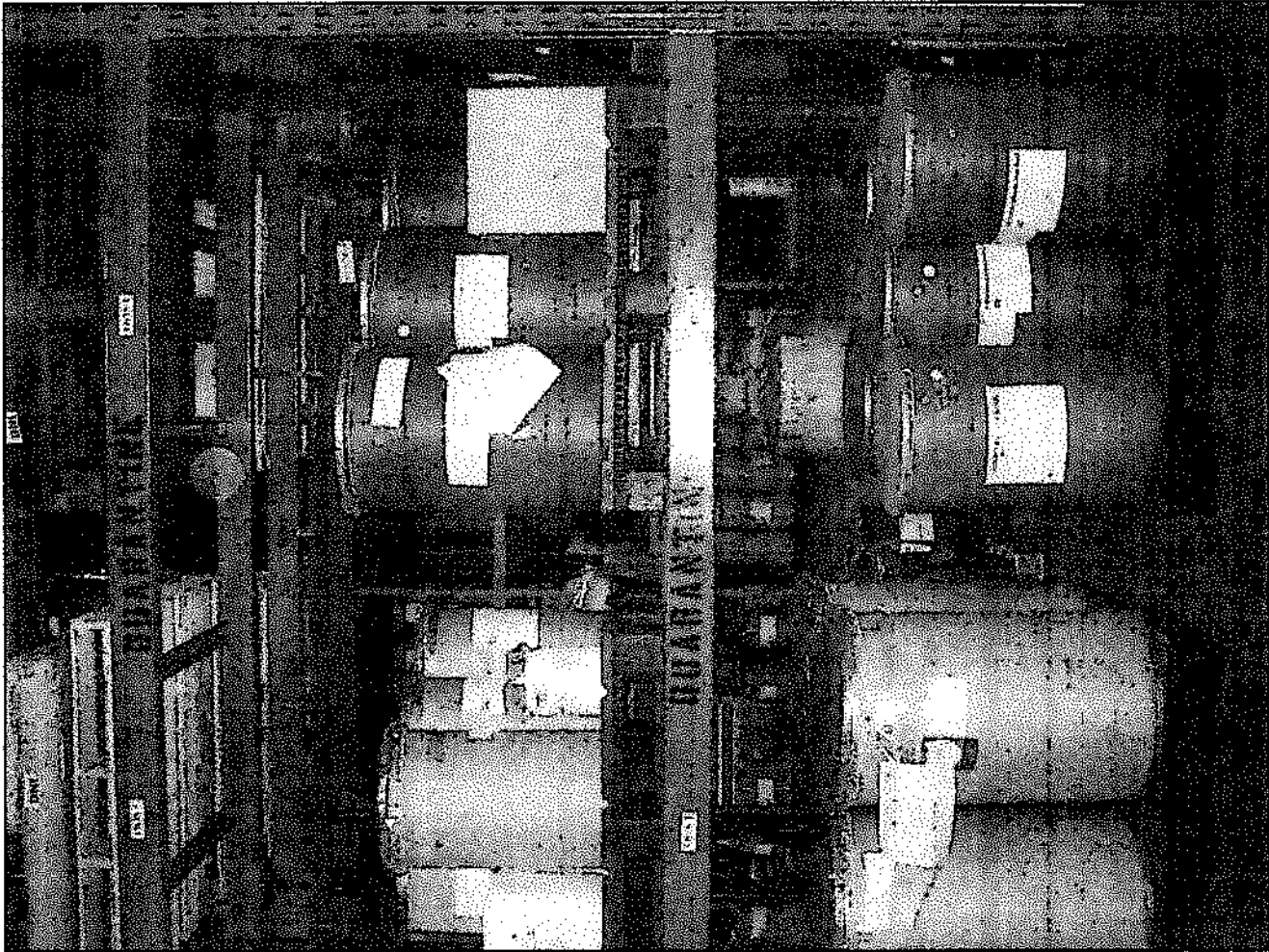


| Attributes         |   |
|--------------------|---|
| Photographer       | A. Ruhs   |
| Original File Name | IMGP0045.JPG  |
| Date/Time          | 6/14/2017 11:19:31 AM   |
| Description        | Trench from building, end of line at strainer prior to entering pit tank. |

Title: PCI Synthesis

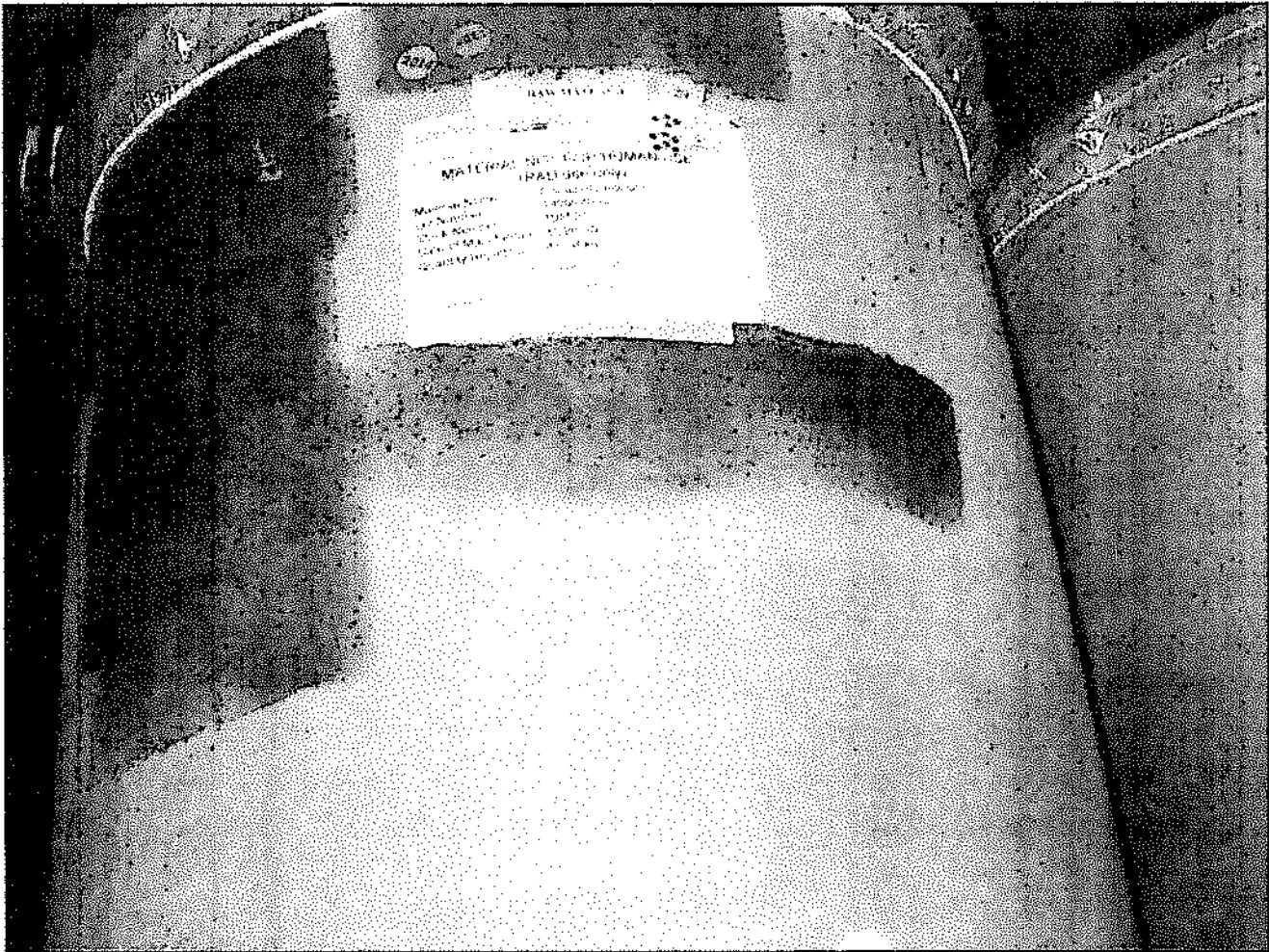


| Attributes         |   |
|--------------------|---|
| Photographer       | A. Ruhs   |
| Original File Name | IMGP0046.JPG  |
| Date/Time          | 6/14/2017 11:28:42 AM   |
| Description        | Portable pump not in service that Region 1 did LDAR monitoring on. Bottom right shows open ended hose, reading approximately 30-70 ppm. Bottom left shows open end, reading approximately 290 ppm. Had the facility disconnect top of hose from the pump and got a reading greater than 10,000 ppm. |



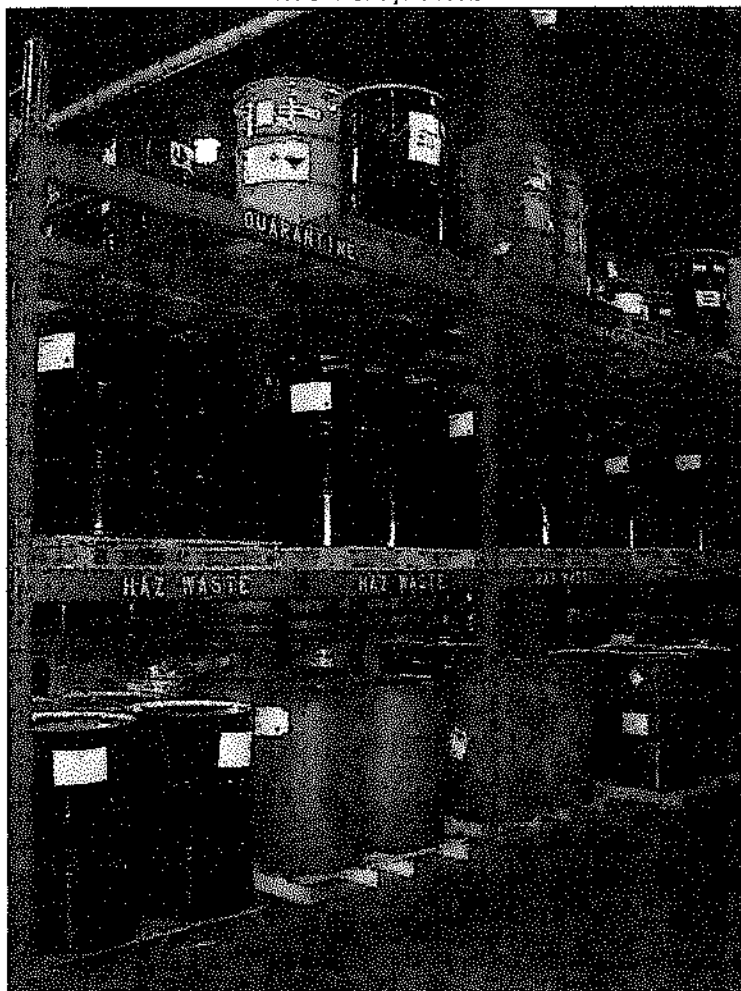
| Attributes         |   |
|--------------------|---|
| Photographer       | A. Ruhs                                 |
| Original File Name | IMG0047.JPG                             |
| Date/Time          | 6/14/2017 3:25:17 PM                    |
| Description        | Warehouse "quarantine" selves overview. |

Title: PCI Synthesis



| Attributes         |   |
|--------------------|---|
| Photographer       | A. Ruhs   |
| Original File Name | IMGP0048.JPG  |
| Date/Time          | 6/14/2017 3:25:31 PM  |
| Description        | Warehouse "quarantine" selves - close-up on label for 2010 dated material awaiting disposal decision. |

Title: PCI Synthesis

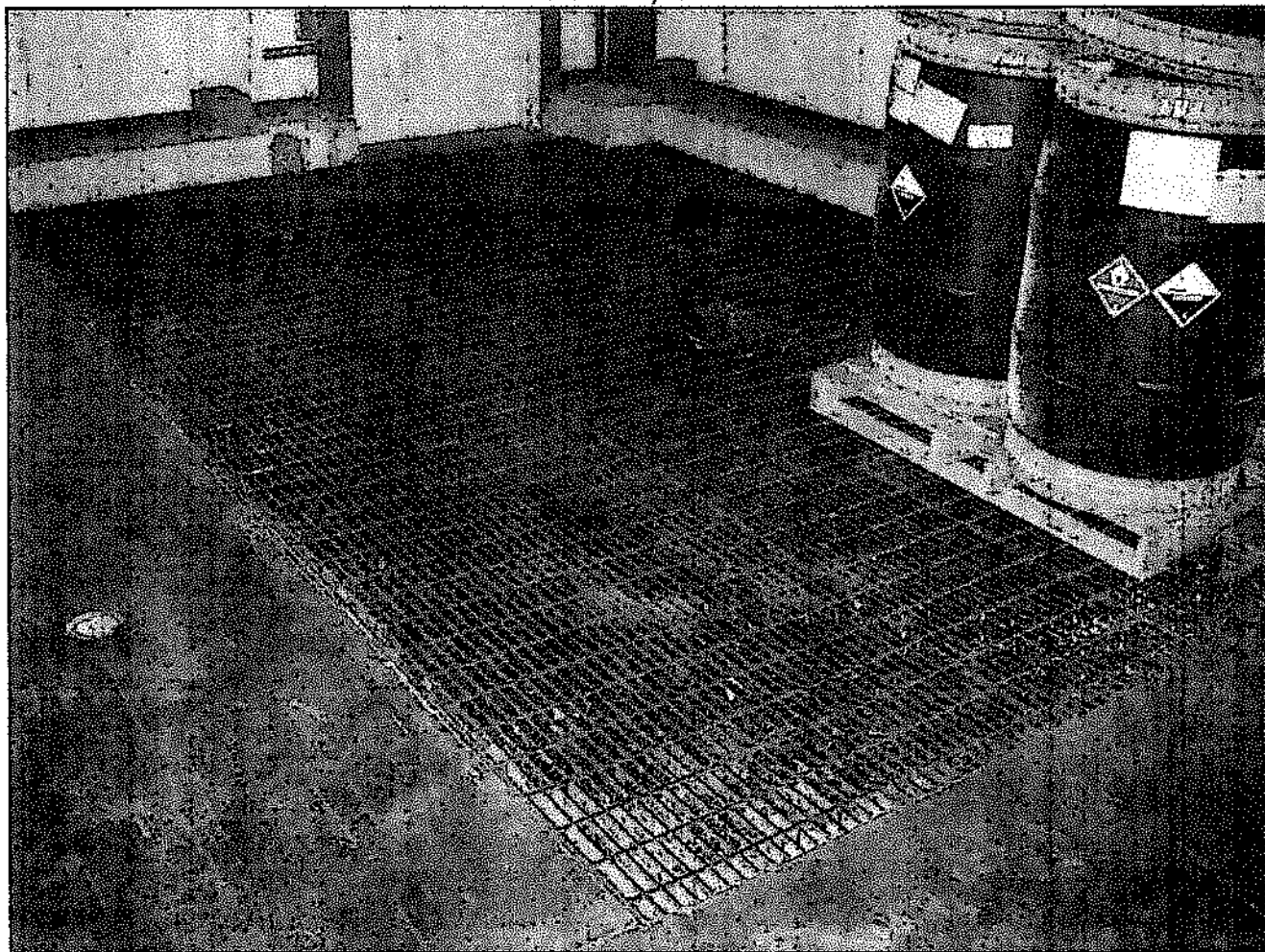


| Attributes         |   |
|--------------------|---|
| Photographer       | A. Ruhs   |
| Original File Name | IMG0049.JPG   |
| Date/Time          | 6/14/2017 3:43:30 PM                                  |
| Description        | Less-than-90-day accumulation area drum storage rack. |



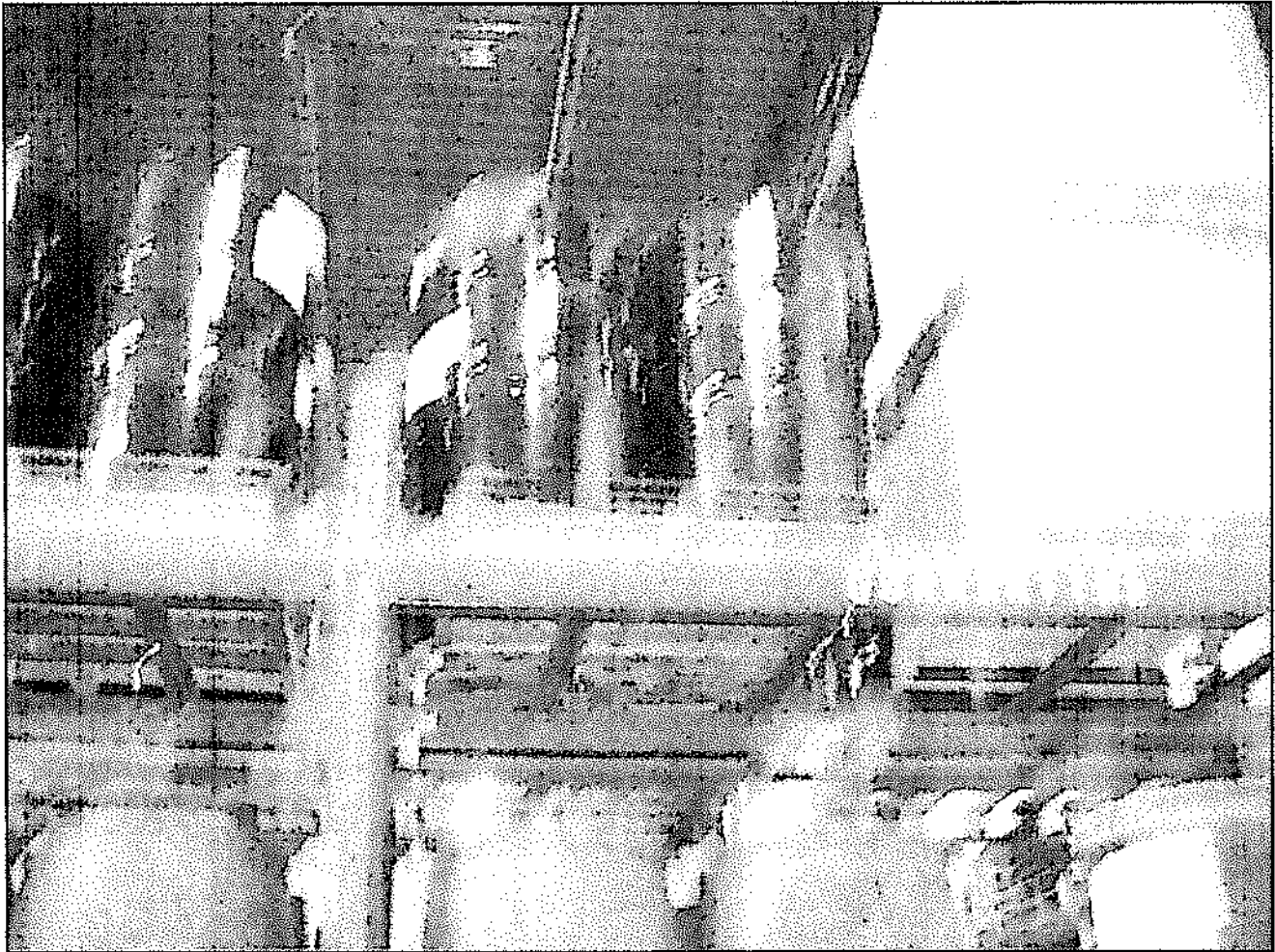
| Attributes         |  |
|--------------------|--|
| Photographer       | A. Ruhs  |
| Original File Name | IMGP0050.JPG                                     |
| Date/Time          | 6/14/2017 3:45:05 PM                             |
| Description        | Less-than-90-day accumulation area - floor area. |

Title: PCI Synthesis



| Attributes         |  |
|--------------------|--|
| Photographer       | A. Ruhs  |
| Original File Name | IMGP0051.JPG   |
| Date/Time          | 6/14/2017 3:56:48 PM   |
| Description        | Sump for entire flammable area, which includes the less-than-90-day accumulation area and flammable storage. |

Title: PCI Synthesis

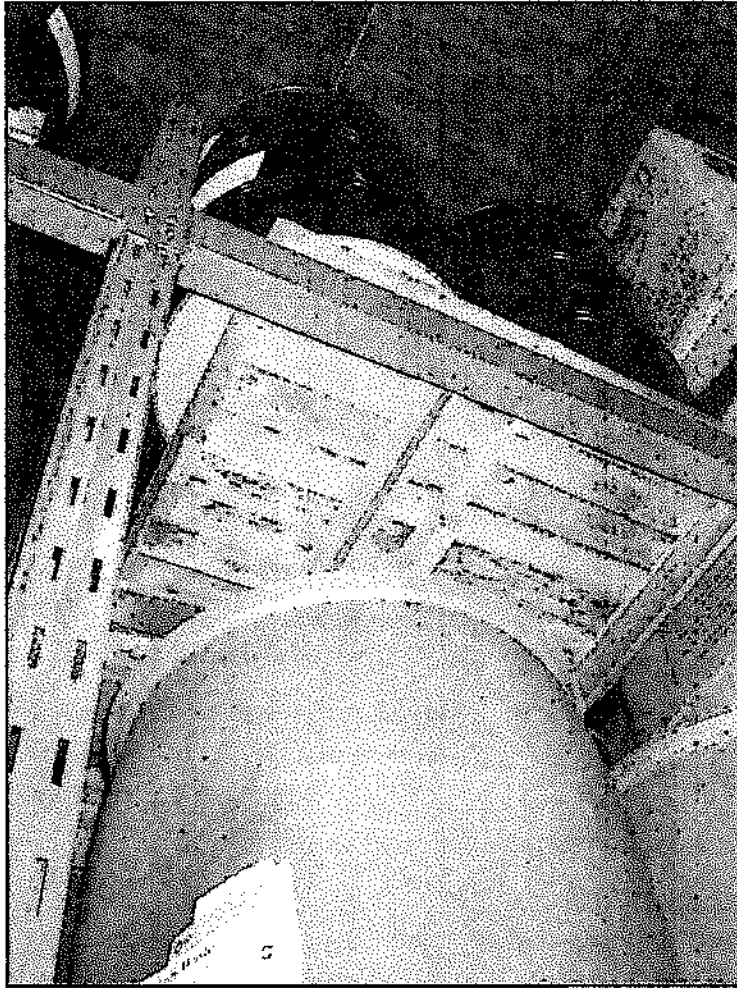


| Attributes         |   |
|--------------------|---|
| Photographer       | A. Ruhs   |
| Original File Name | IMGP0052.JPG  |
| Date/Time          | 6/14/2017 3:58:24 PM  |
| Description        | Top row of storage rack (3rd row) at the less-than-90-day accumulation area with 2 pallets of hazardous waste (blurry). |

Title: PCI Synthesis



| Attributes         |   |
|--------------------|---|
| Photographer       | A. Ruhs   |
| Original File Name | IMG0053.JPG   |
| Date/Time          | 6/14/2017 3:58:47 PM  |
| Description        | Top row of storage rack (3rd row) at the less-than-90-day accumulation area with 2 pallets of hazardous waste (blurry). |



| Attributes         |  |
|--------------------|--|
| Photographer       | A. Ruhs  |
| Original File Name | IMGP0054.JPG   |
| Date/Time          | 6/14/2017 3:59:56 PM   |
| Description        | Close-up on drum labels for the top and middle rack at the less-than-90-day accumulation area. |

Title: PCI Synthesis

**Hazardous Waste**

Hazard(s): IGNITABLE, TOXIC

Actual Contents: Acetonitrile / methylene chloride / toluene  
methanol / acetone / isopropanol / ethyl acetate / heptane / THF

pH (if aqueous)                      Range  $\geq 2.0$  or  $\leq 12.5$


Source: Batch #                      Step                     

Other                     

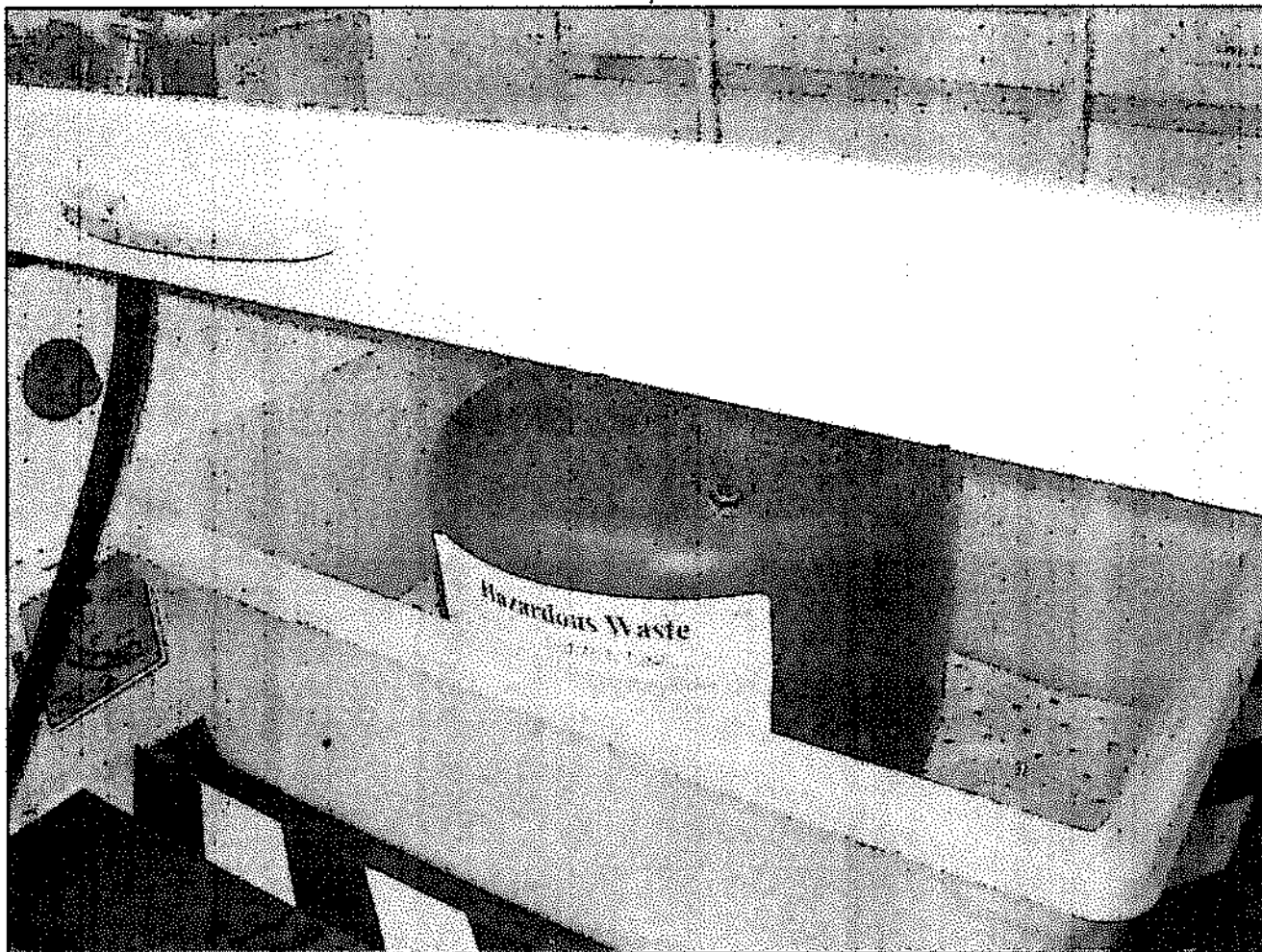
Date 6/15/17 By AR

**HANDLE WITH CARE**

PCIS  
007

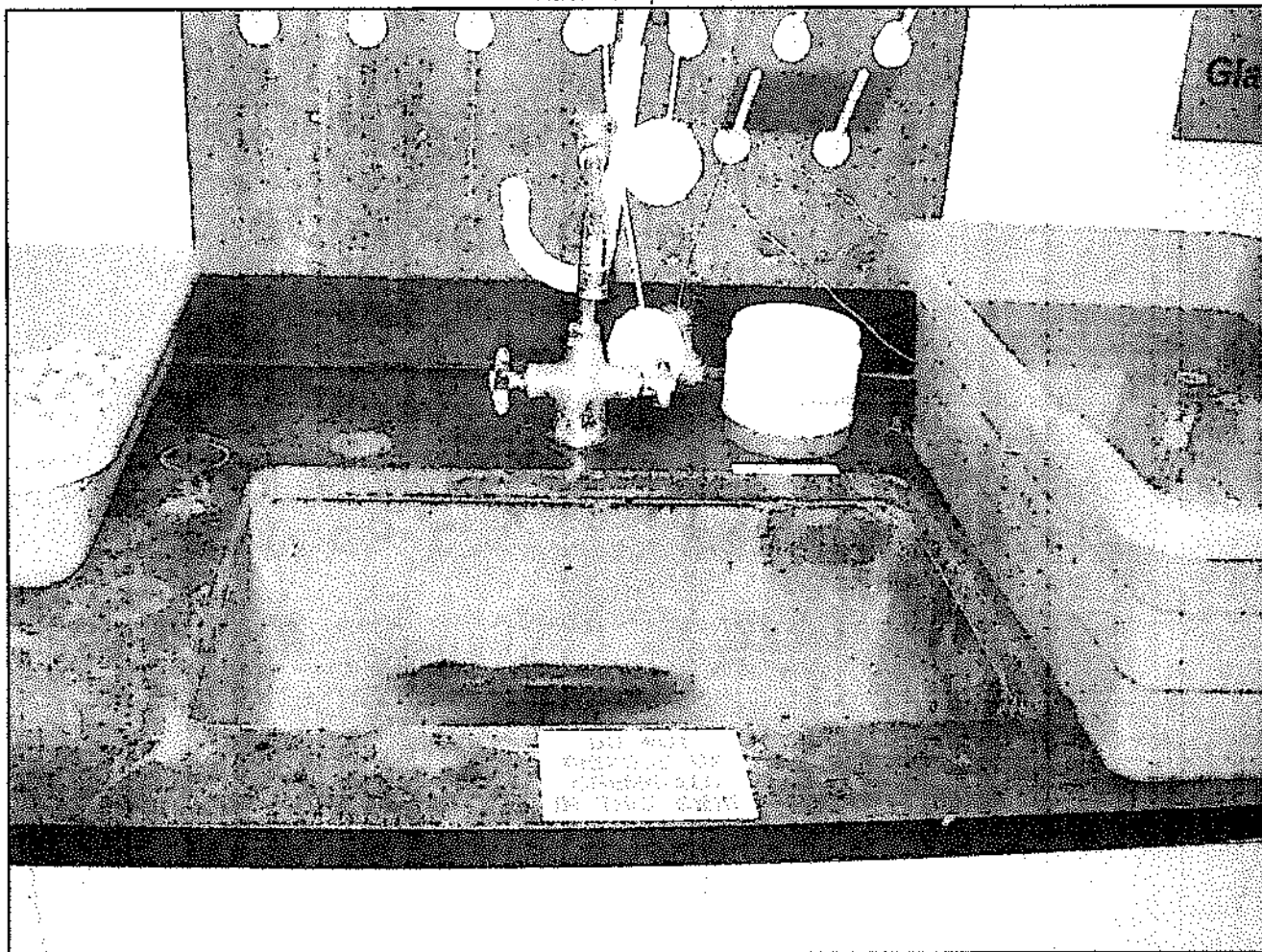


| Attributes         |   |
|--------------------|---|
| Photographer       | A. Ruhs   |
| Original File Name | IMG0055.JPG   |
| Date/Time          | 6/14/2017 4:19:33 PM  |
| Description        | Return visit from previous day - close-up on corrected label on hazardous waste drum remaining at the less-than-90-day accumulation area near PFN #2 and Edwards #3 pump. |

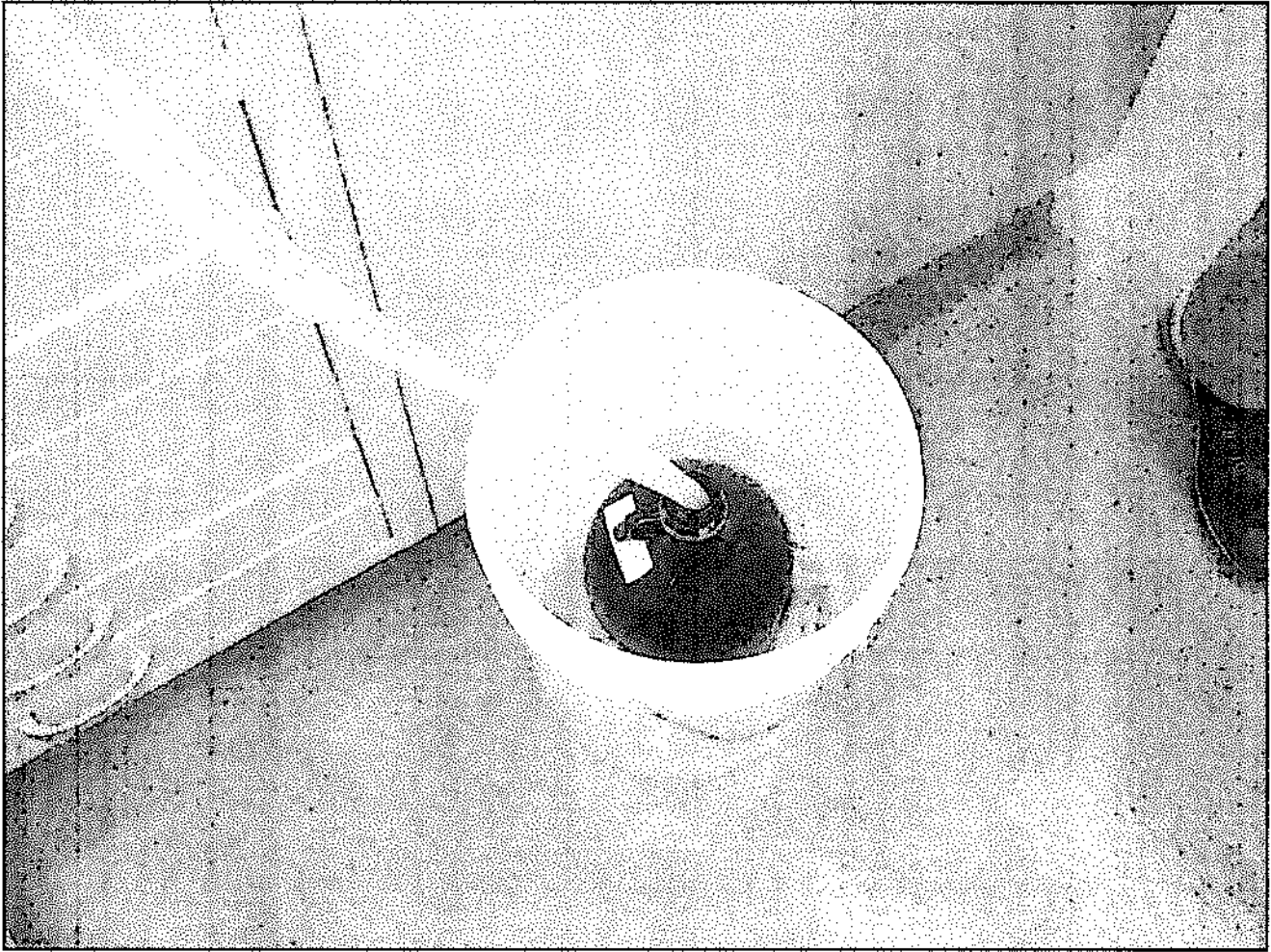


| Attributes         |   |
|--------------------|---|
| Photographer       | A. Ruhs   |
| Original File Name | IMGP0056.JPG                                      |
| Date/Time          | 6/15/2017 2:05:36 PM                              |
| Description        | QC lab, room #2 satellite accumulation container. |

Title: PCI Synthesis

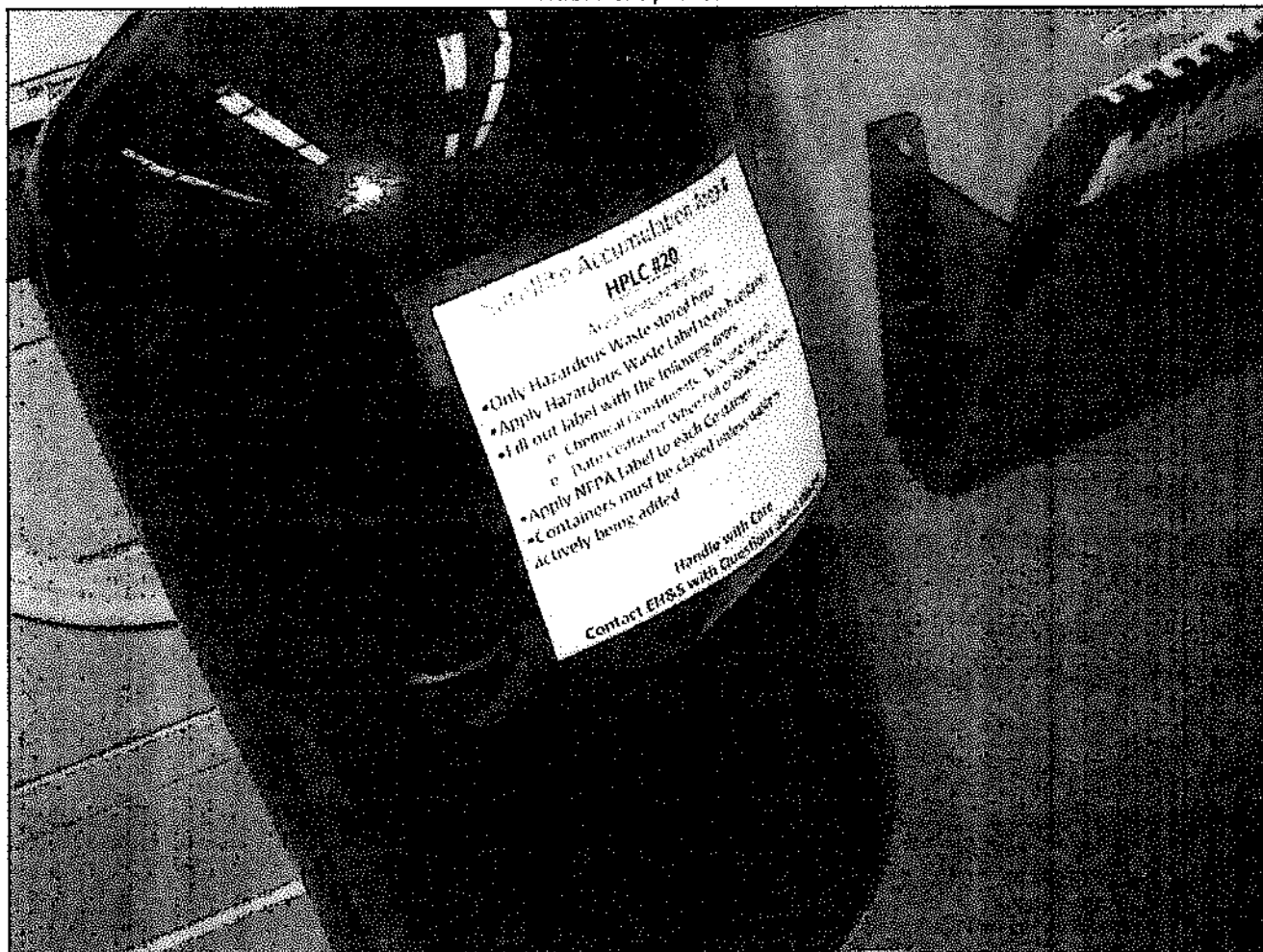


| Attributes         |   |
|--------------------|---|
| Photographer       | A. Ruhs   |
| Original File Name | IMG0057.JPG   |
| Date/Time          | 6/15/2017 2:06:07 PM                                      |
| Description        | QC lab, room #2, lab sink - no chemicals down sink label. |



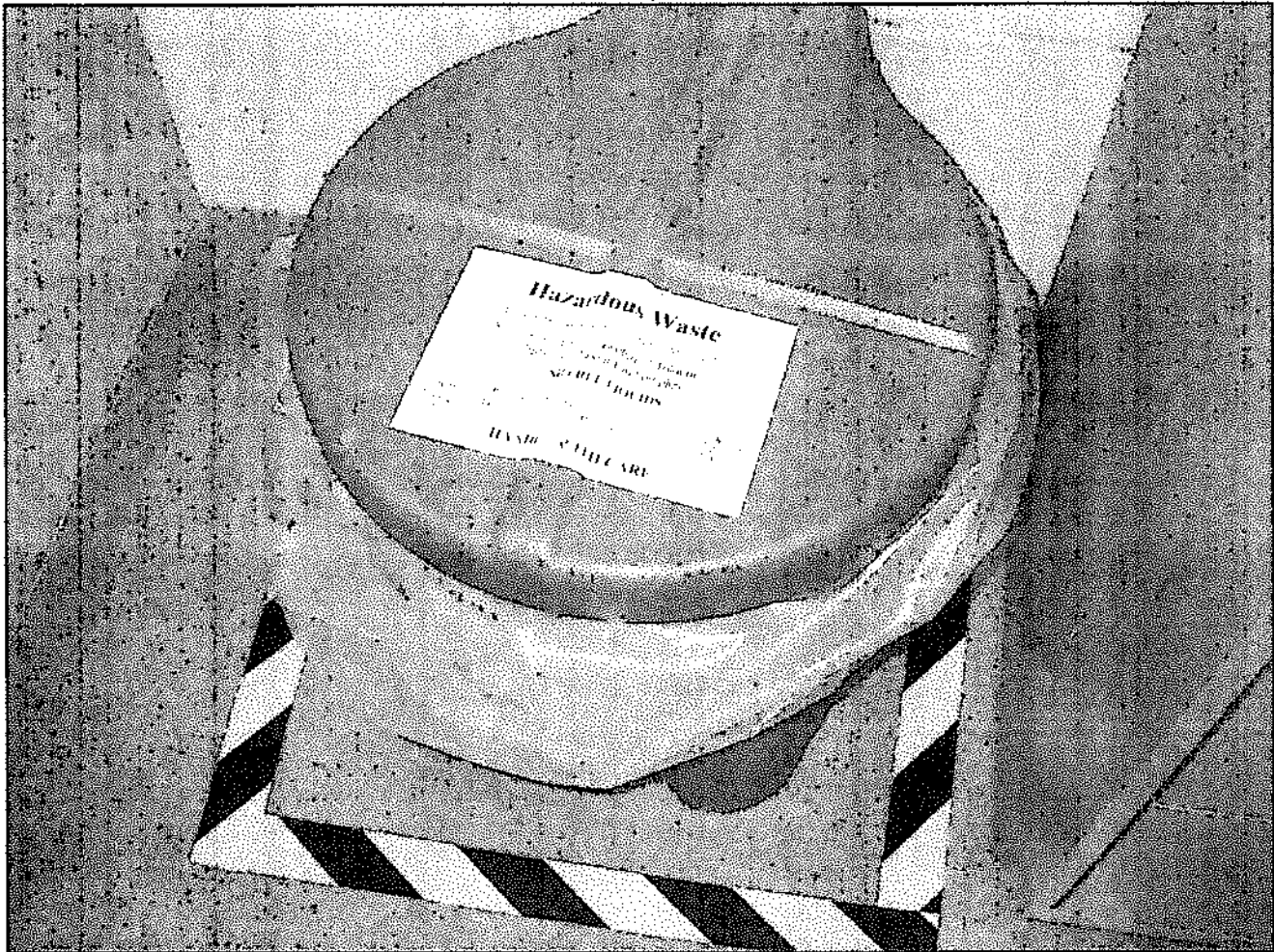
| Attributes         |                      |
|--------------------|----------------------|
| Photographer       | A. Ruhs              |
| Original File Name | IMG0058.JPG          |
| Date/Time          | 6/15/2017 2:08:22 PM |
| Description        |                      |

Title: PCI Synthesis



| Attributes         |  |
|--------------------|--|
| Photographer       | A. Ruhs  |
| Original File Name | IMG0059.JPG  |
| Date/Time          | 6/15/2017 2:08:52 PM   |
| Description        | QC lab, room #2, close-up on label for the open hazardous waste container that collects waste off of HPLC #20. |

Title: PCI Synthesis



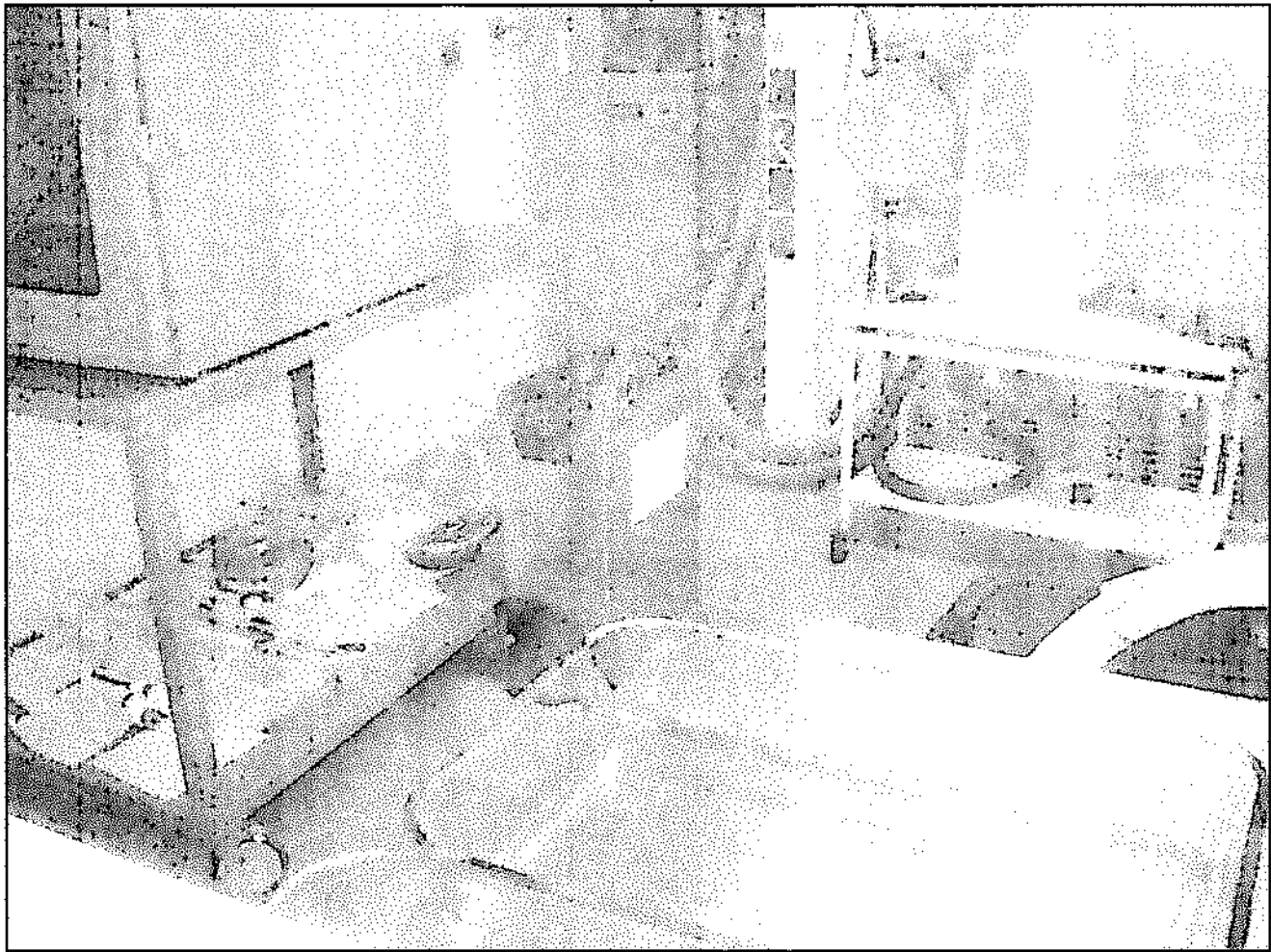
| Attributes         |  |
|--------------------|--|
| Photographer       | A. Ruhs  |
| Original File Name | IMGP0060.JPG   |
| Date/Time          | 6/15/2017 2:14:37 PM   |
| Description        | GC and HPLC in QC Lab, room #1, hazardous waste collection for sample waste material that goes to Tredebe. |

Title: PCI Synthesis



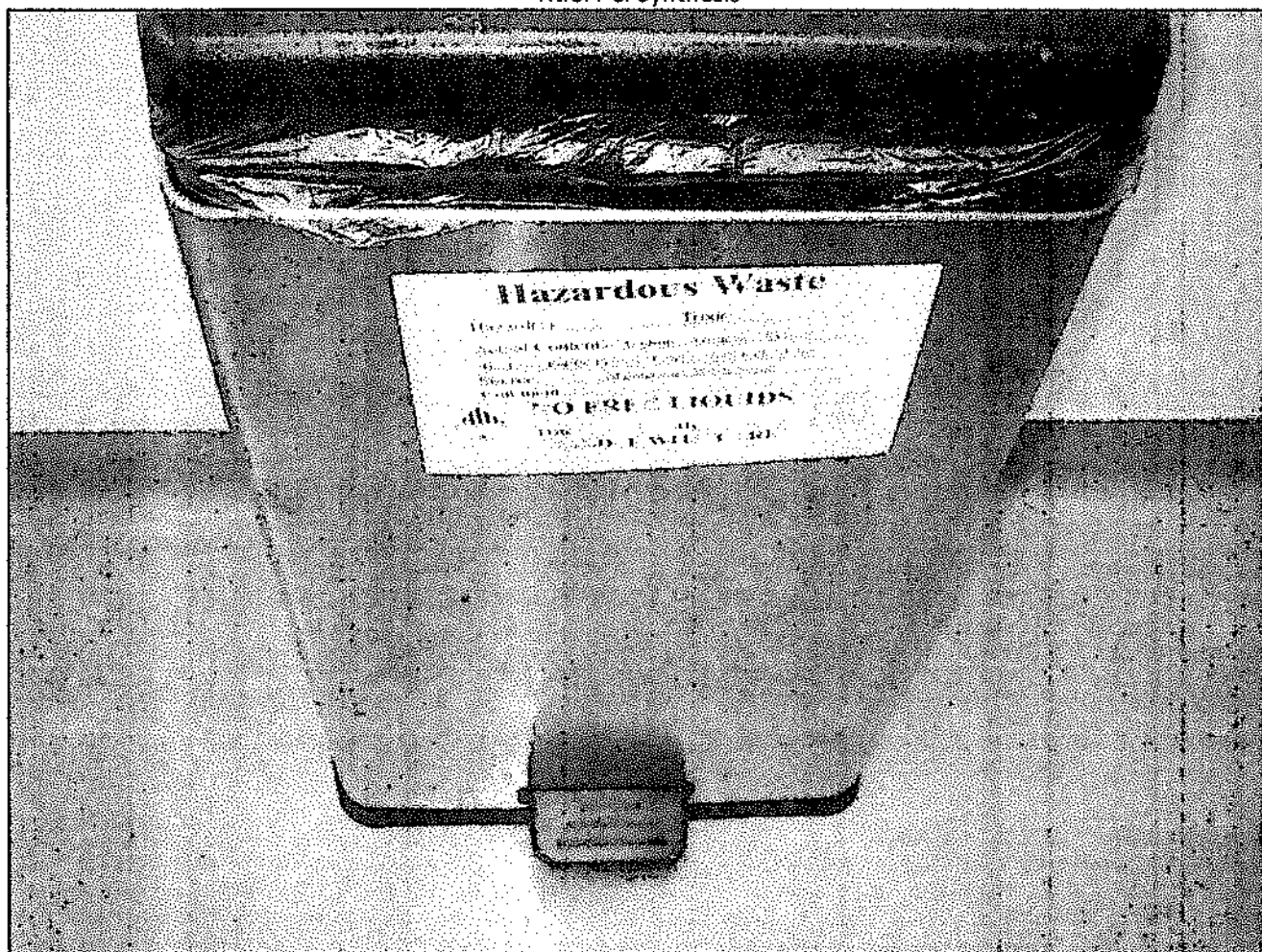
| Attributes         |   |
|--------------------|---|
| Photographer       | A. Ruhs   |
| Original File Name | IMGP0061.JPG  |
| Date/Time          | 6/15/2017 2:22:52 PM  |
| Description        | Satellite accumulation for Malvern Particle Analyzer waste. |

Title: PCI Synthesis

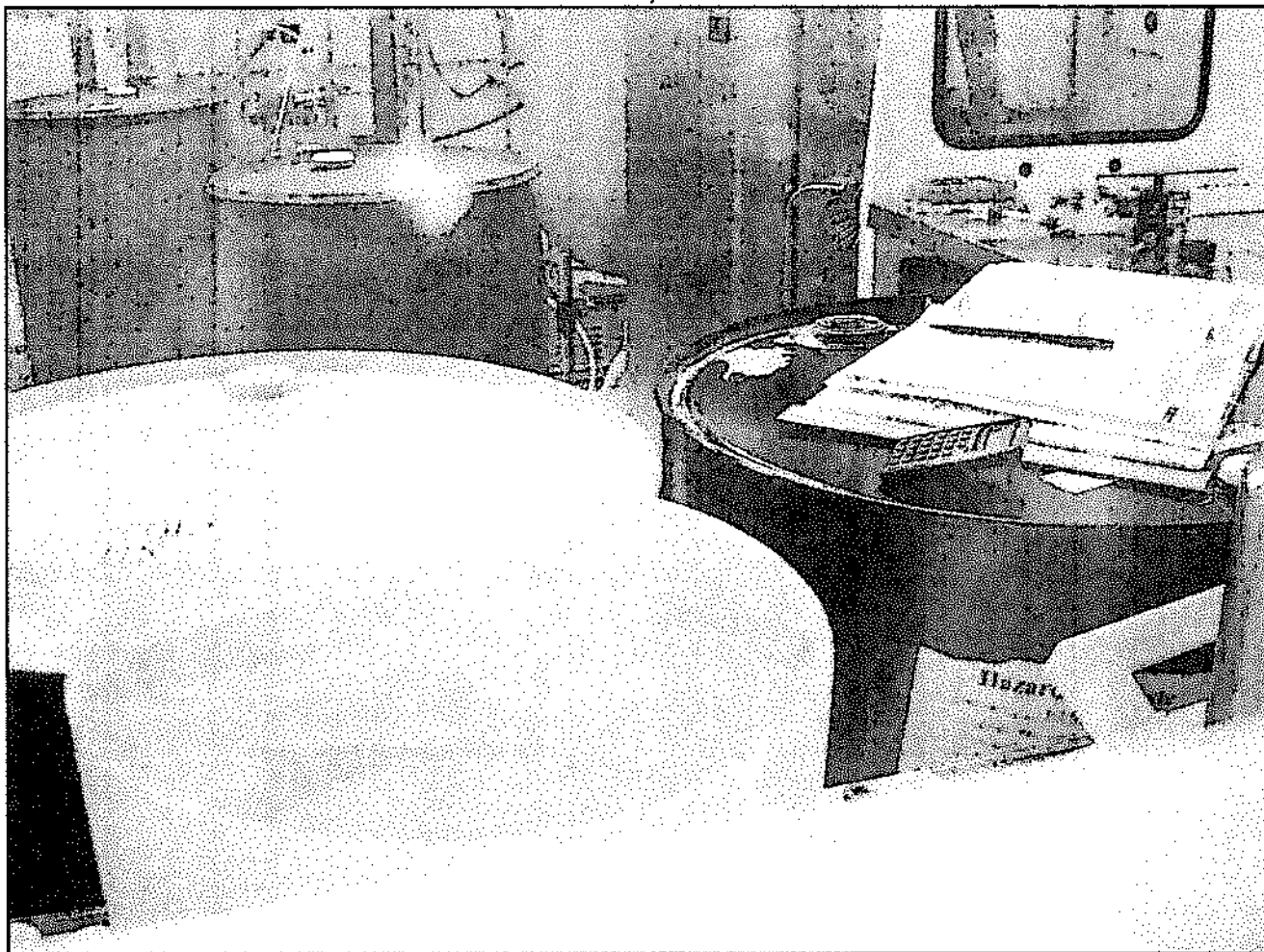


| Attributes         |   |
|--------------------|---|
| Photographer       | A. Ruhs   |
| Original File Name | IMGP0062.JPG  |
| Date/Time          | 6/15/2017 2:41:17 PM  |
| Description        | GMP-Kilo Lab #3, solid hazardous waste container missing a lid. |

Title: PCI Synthesis



| Attributes         |   |
|--------------------|---|
| Photographer       | A. Ruhs   |
| Original File Name | IMGP0063.JPG  |
| Date/Time          | 6/15/2017 2:41:35 PM  |
| Description        | GMP-Kilo Lab hallway, solid hazardous waste container for PPE collection. |



| Attributes         |   |
|--------------------|---|
| Photographer       | A. Ruhs   |
| Original File Name | IMGP0064.JPG  |
| Date/Time          | 6/15/2017 2:41:48 PM  |
| Description        | GMP-Kilo Lab, unit #1, 3 raw material and product drums and 1 hazardous waste drum. |

# CHEMREC

190 Brasseau, Cowansville  
Québec, Canada J2K 3G6

## WASTE MATERIAL PROFILE SHEET

Profile #:3217

### Generator Information

Name: PCI Synthesis Inc  
Address: 9 Opportunity Way, Newburyport, MA 01950

Billing Address: same

Phone: 978-462-5555

Phone: \_\_\_\_\_

Fax: 978-463-0045

Fax: \_\_\_\_\_

EPA ID: MAR 000007955

### Material Description

Common Name: Waste Acetone Volume: 100 dr/year  
Process generating Waste Stream: Wash  
Liquid layering: None: X Viscosity: Low: X  
Bi-Layered: \_\_\_\_\_ Medium: \_\_\_\_\_  
Multiple: \_\_\_\_\_ High: \_\_\_\_\_  
PH Level: Neutral Specific Gravity: 0.8-0.9 Flashpoint: <70 F  
Settleable Solids: None Color: clear, yellow Odor: Typical  
Reactivity: none

### Chemical Composition

|         |     |   |
|---------|-----|---|
| Acetone | >95 | % |
| Water   | 0-5 | % |
|         |     | % |
|         |     | % |
|         |     | % |
|         |     | % |
|         |     | % |
|         |     | % |
|         |     | % |
|         |     | % |
|         |     | % |

### Metals and Other Substances

|                        |          |             |          |
|------------------------|----------|-------------|----------|
| Total:                 | <u>X</u> | TCLP:       |          |
| Arsenic:               | <u>0</u> | Berellium:  | <u>0</u> |
| Barium:                | <u>0</u> | Cobalt:     | <u>0</u> |
| Cadmium:               | <u>0</u> | Copper:     | <u>0</u> |
| Chromium:              | <u>0</u> | Manganese:  | <u>0</u> |
| Lead:                  | <u>0</u> | Zinc:       | <u>0</u> |
| Mercury:               | <u>0</u> | Antimony:   | <u>0</u> |
| Selenium:              | <u>0</u> | Sulfides:   | <u>0</u> |
| Silver:                | <u>0</u> | Cyanides:   | <u>0</u> |
| Nickel:                | <u>0</u> | Pesticides: | <u>0</u> |
| Thallium:              | <u>0</u> | P.C.B.'s:   | <u>0</u> |
| Benzene(Neshap's Reg): |          |             | <u>0</u> |

### D.O.T. Information

Proper Shipping Name: RO, Waste Acetone

Contains: \_\_\_\_\_

Hazard Class 3 UN/NA #: UN 1090 PG: II EPA Codes: D001, F003

I certify that the information provided is complete and accurate to the best of my knowledge.

Name: John Allmond

Date: \_\_\_\_\_

Signature: \_\_\_\_\_

Title: \_\_\_\_\_

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# CHEMREC

190 Brosseau, Cowansville  
Québec, Canada J2K 3G6

## WASTE MATERIAL PROFILE SHEET

Profile #: 3219V

### Generator Information

Name: PCI Synthesis Inc  
Address: 9 Opportunity Way, Newburyport, MA 01950

Billing Address: same

Phone: 978-462-5555

Phone: \_\_\_\_\_

Fax: 978-463-0045

Fax: \_\_\_\_\_

EPA ID: MAR 000007955

### Material Description

Common Name: Waste Methanol Volume: 200dr/year

Process generating Waste Stream: Wash

Liquid layering: None: X

Viscosity: Low: X

Bi-Layered:

Medium:

Multiple:

High:

PH Level: Neutral Specific Gravity: 0.8-0.9 Flashpoint: <140 F

Settleable Solids: None Color: clear, yellow Odor: Typical

Reactivity: none

### Chemical Composition

|          |     |   |
|----------|-----|---|
| Methanol | >95 | % |
| Water    | 0-5 | % |
|          |     | % |
|          |     | % |
|          |     | % |
|          |     | % |
|          |     | % |
|          |     | % |
|          |     | % |
|          |     | % |
|          |     | % |

### Metals and Other Substances

|                        |   |             |   |
|------------------------|---|-------------|---|
| Total:                 | X | TCLP:       |   |
| Arsenic:               | 0 | Berellium:  | 0 |
| Barium:                | 0 | Cobalt:     | 0 |
| Cadmium:               | 0 | Copper:     | 0 |
| Chromium:              | 0 | Manganese:  | 0 |
| Lead:                  | 0 | Zinc:       | 0 |
| Mercury:               | 0 | Antimony:   | 0 |
| Selenium:              | 0 | Sulfides:   | 0 |
| Silver:                | 0 | Cyanides:   | 0 |
| Nickel:                | 0 | Pesticides: | 0 |
| Thallium:              | 0 | P.C.B.'s:   | 0 |
| Benzene(Neshap's Reg): |   |             | 0 |

### D.O.T. Information

Proper Shipping Name: RQ, Waste Methanol

Contains:

Hazard Class 3 UN/NA #: UN 1230 PG: II EPA Codes: D001, F003

I certify that the information provided is complete and accurate to the best of my knowledge.

Name: John Allmond

Date: \_\_\_\_\_

Signature: \_\_\_\_\_

Title: \_\_\_\_\_

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# CHEMREC

190 Brosseau, Cowansville  
Québec, Canada J2K 3G6

## WASTE MATERIAL PROFILE SHEET

Profile #: 3220V

### Generator Information

Name: PCI Synthesis Inc  
Address: 9 Opportunity Way, Newburyport, MA 01950

Billing Address: same

Phone: 978-462-5555

Phone: \_\_\_\_\_

Fax: 978-463-0045

Fax: \_\_\_\_\_

EPA ID: MAR 000007955

### Material Description

Common Name: Waste Dichloromethane Volume: 100dr/year

Process generating Waste Stream: Wash

Liquid layering: None: X

Viscosity: Low: X

Bi-Layered: \_\_\_\_\_

Medium: \_\_\_\_\_

Multiple: \_\_\_\_\_

High: \_\_\_\_\_

PH Level: Neutral

Specific Gravity: 1.3-1.4

Flashpoint: None

Settleable Solids: None

Color: clear, yellow

Odor: Typical

Reactivity: none

### Chemical Composition

|                 |     |   |
|-----------------|-----|---|
| Dichloromethane | >95 | % |
| Others          | 0-5 | % |
|                 |     | % |
|                 |     | % |
|                 |     | % |
|                 |     | % |
|                 |     | % |
|                 |     | % |
|                 |     | % |
|                 |     | % |
|                 |     | % |

### Metals and Other Substances

|                        |          |             |          |
|------------------------|----------|-------------|----------|
| Total:                 | <u>X</u> | TCLP:       |          |
| Arsenic:               | <u>0</u> | Berellium:  | <u>0</u> |
| Barium:                | <u>0</u> | Cobalt:     | <u>0</u> |
| Cadmium:               | <u>0</u> | Copper:     | <u>0</u> |
| Chromium:              | <u>0</u> | Manganese:  | <u>0</u> |
| Lead:                  | <u>0</u> | Zinc:       | <u>0</u> |
| Mercury:               | <u>0</u> | Antimony:   | <u>0</u> |
| Selenium:              | <u>0</u> | Sulfides:   | <u>0</u> |
| Silver:                | <u>0</u> | Cyanides:   | <u>0</u> |
| Nickel:                | <u>0</u> | Pesticides: | <u>0</u> |
| Thallium:              | <u>0</u> | P.C.B.'s:   | <u>0</u> |
| Benzene(Neshap's Reg): |          |             | <u>0</u> |

### D.O.T. Information

Proper Shipping Name: RO, Waste Dichloromethane

Contains: \_\_\_\_\_

Hazard Class 6.1 UN/NA #: UN 1593 PG: III EPA Codes: F002

I certify that the information provided is complete and accurate to the best of my knowledge.

Name: John Allmond

Date: \_\_\_\_\_

Signature: \_\_\_\_\_

Title: \_\_\_\_\_

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# CHEMREC

190 Brosseau, Cowansville  
Québec, Canada J2K 3G6

## WASTE MATERIAL PROFILE SHEET

Profile #: 3221

### Generator Information

Name: PCI Synthesis Inc  
Address: 9 Opportunity Way, Newburyport, MA 01950

Billing Address: same

Phone: 978-462-5555

Phone: \_\_\_\_\_

Fax: 978-463-0045

Fax: \_\_\_\_\_

EPA ID: MAR 000007955

### Material Description

Common Name: Waste Toluene Volume: 200dr/year

Process generating Waste Stream: Wash

Liquid layering: None: X

Viscosity: Low: X

Bi-Layered: \_\_\_\_\_

Medium: \_\_\_\_\_

Multiple: \_\_\_\_\_

High: \_\_\_\_\_

PH Level: Neutral Specific Gravity: 0.8-0.9 Flashpoint: <140 F

Settleable Solids: None Color: clear, yellow Odor: Typical

Reactivity: none

### Chemical Composition

|         |      |   |
|---------|------|---|
| Toluene | >90  | % |
| Water   | 0-10 | % |
|         |      | % |
|         |      | % |
|         |      | % |
|         |      | % |
|         |      | % |
|         |      | % |
|         |      | % |
|         |      | % |
|         |      | % |

### Metals and Other Substances

|                        |          |             |          |
|------------------------|----------|-------------|----------|
| Total:                 | <u>X</u> | TCLP:       |          |
| Arsenic:               | <u>0</u> | Beryllium:  | <u>0</u> |
| Barium:                | <u>0</u> | Cobalt:     | <u>0</u> |
| Cadmium:               | <u>0</u> | Copper:     | <u>0</u> |
| Chromium:              | <u>0</u> | Manganese:  | <u>0</u> |
| Lead:                  | <u>0</u> | Zinc:       | <u>0</u> |
| Mercury:               | <u>0</u> | Antimony:   | <u>0</u> |
| Selenium:              | <u>0</u> | Sulfides:   | <u>0</u> |
| Silver:                | <u>0</u> | Cyanides:   | <u>0</u> |
| Nickel:                | <u>0</u> | Pesticides: | <u>0</u> |
| Thallium:              | <u>0</u> | P.C.B.'s:   | <u>0</u> |
| Benzene(Neshap's Reg): |          |             | <u>0</u> |

### D.O.T. Information

Proper Shipping Name: RQ, Waste Toluene

Contains: \_\_\_\_\_

Hazard Class 3 UN/NA #: UN 1294 PG: I EPA Codes: D001, F005

I certify that the information provided is complete and accurate to the best of my knowledge.

Name: John Almond

Date: \_\_\_\_\_

Signature: \_\_\_\_\_

Title: \_\_\_\_\_

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# CHEMREC

190 Brosseau, Cowansville  
Québec, Canada J2K 3G6

## WASTE MATERIAL PROFILE SHEET

Profile #: 3250

### Generator Information

Name: PCI Synthesis Inc.  
Address: 9 Opportunity Way

Billing Address: SAME

Phone: 978-462-5555  
Fax: 978-463-0045  
EPA ID: MAR000007955

Phone: \_\_\_\_\_  
Fax: \_\_\_\_\_

### Material Description

Common Name: WASTE ETHYL ACETATE Volume: 200dr/year

Process generating Waste Stream: Wash

Liquid layering: None: X  
Bi-Layered: \_\_\_\_\_  
Multiple: \_\_\_\_\_

Viscosity: Low: X  
Medium: \_\_\_\_\_  
High: \_\_\_\_\_

PH Level: Neutral Specific Gravity: 0.8-0.9 Flashpoint: <140 F  
Settleable Solids: None Color: Clear, yellow Odor: Typical

Reactivity: None

### Chemical Composition

|               |      |   |
|---------------|------|---|
| Ethyl Acetate | >90  | % |
| Water         | 0-10 | % |
|               |      | % |
|               |      | % |
|               |      | % |
|               |      | % |
|               |      | % |
|               |      | % |
|               |      | % |
|               |      | % |
|               |      | % |

### Metals and Other Substances

|                        |          |             |          |
|------------------------|----------|-------------|----------|
| Total:                 | <u>X</u> | TCLP:       | <u>0</u> |
| Arsenic:               | <u>0</u> | Beryllium:  | <u>0</u> |
| Barium:                | <u>0</u> | Cobalt:     | <u>0</u> |
| Cadmium:               | <u>0</u> | Copper:     | <u>0</u> |
| Chromium:              | <u>0</u> | Manganese:  | <u>0</u> |
| Lead:                  | <u>0</u> | Zinc:       | <u>0</u> |
| Mercury:               | <u>0</u> | Antimony:   | <u>0</u> |
| Selenium:              | <u>0</u> | Sulfides:   | <u>0</u> |
| Silver:                | <u>0</u> | Cyanides:   | <u>0</u> |
| Nickel:                | <u>0</u> | Pesticides: | <u>0</u> |
| Thallium:              | <u>0</u> | P.C.B.'s:   | <u>0</u> |
| Benzene(Neshap's Reg): |          |             | <u>0</u> |

### D.O.T. Information

Proper Shipping Name: RO, Waste Ethyl Acetate

Contains: \_\_\_\_\_

Hazard Class 3 UN/NA #: UN1173 PG:II EPA Codes: D001, F003

I certify that the information provided is complete and accurate to the best of my knowledge.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Signature: \_\_\_\_\_ Title: \_\_\_\_\_

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Form Approved, OMB No. 2050-0039

GENERATOR'S INITIAL COPY  
PCI Synthesis, Inc.  
Newburyport, Massachusetts

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PCI Synthesis, Inc.  
Newburyport, Massachusetts

GENERATOR'S INITIAL COPY  
PCI Synthesis, Inc.  
Newburyport, Massachusetts

|   |         |  |  |                |  |   |      |  |                  |  |
|---|---------|--|--|----------------|--|---|------|--|------------------|--|
| <b>UNIFORM HAZARDOUS WASTE MANIFEST</b>   |         | 1. Generator ID Number<br>00000000000000000000   |  | 2. Page 1 of 1 |  | 3. Emergency Response Phone<br>617-237-1111 |      | 4. Manifest Tracking Number<br>016743398 JJK |                  |  |
|   |         | 5. Generator's Name and Mailing Address<br>NATIONAL DEFENSE UNIVERSITY<br>4100 PENTAGON AVE<br>WASHINGTON, DC 20340<br>Generator's Phone: 202-799-0001 |  |                |  |   |      |  |                  | Generator's Site Address (if different than mailing address) |
| 6. Transporter 1 Company Name<br>UNION PACIFIC TRANSPORTATION CO., INC.   |         |  |  |                |  |   |      | U.S. EPA ID Number<br>000000000000000000     |                  |  |
| 7. Transporter 2 Company Name   |         |  |  |                |  |   |      | U.S. EPA ID Number                           |                  |  |
| 8. Designated Facility Name and Site Address<br>UNION PACIFIC TRANSPORTATION CO., INC.<br>1000 PENTAGON AVE<br>WASHINGTON, DC 20340<br>Facility's Phone: 202-799-0001   |         |  |  |                |  |   |      | U.S. EPA ID Number<br>000000000000000000     |                  |  |
| GENERATOR   | 9a. HMT | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))   |  |                |  | 10. Containers                              |      | 11. Total Quantity                           | 12. Unit WL/Vol. | 13. Waste Codes  |
|   |         |  |  |                |  | No.   | Type |  |                  |  |
|   | 1.      | HAZARDOUS WASTE - SOLID - INERT - UNREACTIVE   |  |                |  |   |      |  |                  | 0000000000   |
|   | 2.      |  |  |                |  |   |      |  |                  |  |
|   | 3.      |  |  |                |  |   |      |  |                  |  |
| 4.  |         |  |  |                |  |   |      |  |                  |  |
| 14. Special Handling Instructions and Additional Information<br>None  |         |  |  |                |  |   |      |  |                  |  |
| 15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true. |         |  |  |                |  |   |      |  |                  |  |
| Generator's/Offor's Printed/Typed Name  |         |  |  |                |  | Signature                                   |      | Month  | Day              | Year   |
| 16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: Date leaving U.S.:  |         |  |  |                |  |   |      |  |                  |  |
| 17. Transporter Acknowledgment of Receipt of Materials  |         |  |  |                |  |   |      |  |                  |  |
| Transporter 1 Printed/Typed Name  |         |  |  |                |  | Signature                                   |      | Month  | Day              | Year   |
| Transporter 2 Printed/Typed Name  |         |  |  |                |  | Signature                                   |      | Month  | Day              | Year   |
| 18. Discrepancy   |         |  |  |                |  |   |      |  |                  |  |
| 18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection   |         |  |  |                |  |   |      |  |                  |  |
| 18b. Alternate Facility (or Generator) Manifest Reference Number: U.S. EPA ID Number  |         |  |  |                |  |   |      |  |                  |  |
| Facility's Phone:   |         |  |  |                |  |   |      |  |                  |  |
| 18c. Signature of Alternate Facility (or Generator)   |         |  |  |                |  |   |      | Month  | Day              | Year   |
| 19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)   |         |  |  |                |  |   |      |  |                  |  |
| 1.  |         | 2.   |  | 3.             |  | 4.  |      |  |                  |  |
| 20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a  |         |  |  |                |  |   |      |  |                  |  |
| Printed/Typed Name  |         |  |  |                |  | Signature                                   |      | Month  | Day              | Year   |

**DESIGNATED FACILITY TO GENERATOR**  
PCI Synthesis, Inc.  
Newburyport, Massachusetts

PCI Synthesis, Inc.  
Newburyport, Massachusetts

|   |  |  |  |                          |  |  |  |   |  |   |  |
|---|--|--|--|--------------------------|--|--|--|---|--|---|--|
| <b>UNIFORM HAZARDOUS WASTE MANIFEST</b> |  | 1. Generator ID Number<br><b>MAR000007995</b>  |  | 2. Page 1 of<br><b>1</b> |  | 3. Emergency Response Phone<br><b>233.386745</b> |  | 4. Manifest Tracking Number<br><b>C16743397 JJK</b> |  |   |  |
|   |  | 5. Generator's Name and Mailing Address<br><b>PCI SYNTHESIS</b><br><b>9 OPPORTUNITY WAY</b><br><b>NEWBURYPORT, MA 01950</b><br>Generator's Phone: <b>978-462-5555</b><br>Generator's Site Address (if different than mailing address): |  |                          |  |  |  |   |  |   |  |
| <b>GENERATOR</b>                        |  | 6. Transporter 1 Company Name<br><b>TRAINOR TRANSPORTATION, LLC</b>  |  |                          |  | U.S. EPA ID Number<br><b>CT091616086</b>         |  |   |  |   |  |
|   |  | 7. Transporter 2 Company Name  |  |                          |  | U.S. EPA ID Number                               |  |   |  |   |  |
| <b>DESIGNATED FACILITY</b>              |  | 8. Designated Facility Name and Site Address<br><b>NOXITE, LLC</b><br><b>626 GARATUCA STREET</b><br><b>CONANT, NY 12047</b><br>Facility's Phone: <b>(516) 235-4401</b>   |  |                          |  | U.S. EPA ID Number<br><b>NY1035460935</b>        |  |   |  |   |  |
|   |  | 9a. HM<br>9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))<br>10. Containers<br>No. Type<br>11. Total Quantity<br>12. Unit Wt./Vol.<br>13. Waste Codes                   |  |                          |  |  |  |   |  |   |  |
| <b>GENERATOR</b>                        |  | 1. UN1993 WASTE FLAMMABLE LIQUIDS, N.O.S. (ACETONE, METHYLENE CHLORIDE) 3 III RQ(D001)   |  |                          |  | 5  |  | 275 L   |  | 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050 2051 2052 2053 2054 2055 2056 2057 2058 2059 2060 2061 2062 2063 2064 2065 2066 2067 2068 2069 2070 2071 2072 2073 2074 2075 2076 2077 2078 2079 2080 2081 2082 2083 2084 2085 2086 2087 2088 2089 2090 2091 2092 2093 2094 2095 2096 2097 2098 2099 2100 2101 2102 2103 2104 2105 2106 2107 2108 2109 2110 2111 2112 2113 2114 2115 2116 2117 2118 2119 2120 2121 2122 2123 2124 2125 2126 2127 2128 2129 2130 2131 2132 2133 2134 2135 2136 2137 2138 2139 2140 2141 2142 2143 2144 2145 2146 2147 2148 2149 2150 2151 2152 2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2165 2166 2167 2168 2169 2170 2171 2172 2173 2174 2175 2176 2177 2178 2179 2180 2181 2182 2183 2184 2185 2186 2187 2188 2189 2190 2191 2192 2193 2194 2195 2196 2197 2198 2199 2200 2201 2202 2203 2204 2205 2206 2207 2208 2209 2210 2211 2212 2213 2214 2215 2216 2217 2218 2219 2220 2221 2222 2223 2224 2225 2226 2227 2228 2229 2230 2231 2232 2233 2234 2235 2236 2237 2238 2239 2240 2241 2242 2243 2244 2245 2246 2247 2248 2249 2250 2251 2252 2253 2254 2255 2256 2257 2258 2259 2260 2261 2262 2263 2264 2265 2266 2267 2268 2269 2270 2271 2272 2273 2274 2275 2276 2277 2278 2279 2280 2281 2282 2283 2284 2285 2286 2287 2288 2289 2290 2291 2292 2293 2294 2295 2296 2297 2298 2299 2300 2301 2302 2303 2304 2305 2306 2307 2308 2309 2310 2311 2312 2313 2314 2315 2316 2317 2318 2319 2320 2321 2322 2323 2324 2325 2326 2327 2328 2329 2330 2331 2332 2333 2334 2335 2336 2337 2338 2339 2340 2341 2342 2343 2344 2345 2346 2347 2348 2349 2350 2351 2352 2353 2354 2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2369 2370 2371 2372 2373 2374 2375 2376 2377 2378 2379 2380 2381 2382 2383 2384 2385 2386 2387 2388 2389 2390 2391 2392 2393 2394 2395 2396 2397 2398 2399 2400 2401 2402 2403 2404 2405 2406 2407 2408 2409 2410 2411 2412 2413 2414 2415 2416 2417 2418 2419 2420 2421 2422 2423 2424 2425 2426 2427 2428 2429 2430 2431 2432 2433 2434 2435 2436 2437 2438 2439 2440 2441 2442 2443 2444 2445 2446 2447 2448 2449 2450 2451 2452 2453 2454 2455 2456 2457 2458 2459 2460 2461 2462 2463 2464 2465 2466 2467 2468 2469 2470 2471 2472 2473 2474 2475 2476 2477 2478 2479 2480 2481 2482 2483 2484 2485 2486 2487 2488 2489 2490 2491 2492 2493 2494 2495 2496 2497 2498 2499 2500 2501 2502 2503 2504 2505 2506 2507 2508 2509 2510 2511 2512 2513 2514 2515 2516 2517 2518 2519 2520 2521 2522 2523 2524 2525 2526 2527 2528 2529 2530 2531 2532 2533 2534 2535 2536 2537 2538 2539 2540 2541 2542 2543 2544 2545 2546 2547 2548 2549 2550 2551 2552 2553 2554 2555 2556 2557 2558 2559 2560 2561 2562 2563 2564 2565 2566 2567 2568 2569 2570 2571 2572 2573 2574 2575 2576 2577 2578 2579 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2780 2781 2782 2783 2784 2785 2786 2787 2788 2789 2790 2791 2792 2793 2794 2795 2796 2797 2798 2799 2800 2801 2802 2803 2804 2805 2806 2807 2808 2809 2810 2811 2812 2813 2814 2815 2816 2817 2818 2819 2820 2821 2822 2823 2824 2825 2826 2827 2828 2829 2830 2831 2832 2833 2834 2835 2836 2837 2838 2839 2840 2841 2842 2843 2844 2845 2846 2847 2848 2849 2850 2851 2852 2853 2854 2855 2856 2857 2858 2859 2860 2861 2862 2863 2864 2865 2866 2867 2868 2869 2870 2871 2872 2873 2874 2875 2876 2877 2878 2879 2880 2881 2882 2883 2884 2885 2886 2887 2888 2889 2890 2891 2892 2893 2894 2895 2896 2897 2898 2899 2900 2901 2902 2903 2904 2905 2906 2907 2908 2909 2910 2911 2912 2913 2914 2915 2916 2917 2918 2919 2920 2921 2922 2923 2924 2925 2926 2927 2928 2929 2930 2931 2932 2933 2934 2935 2936 2937 2938 2939 2940 2941 2942 2943 2944 2945 2946 2947 2948 2949 2950 2951 2952 2953 2954 2955 2956 2957 2958 2959 2960 2961 2962 2963 2964 2965 2966 2967 2968 2969 2970 2971 2972 2973 2974 2975 2976 2977 2978 2979 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3780 3781 3782 3783 3784 3785 3786 3787 3788 3789 3790 3791 3792 3793 3794 3795 3796 3797 3798 3799 3800 3801 3802 3803 3804 3805 3806 3807 3808 3809 3810 3811 3812 3813 3814 3815 3816 3817 3818 3819 3820 3821 3822 3823 3824 3825 3826 3827 3828 3829 3830 3831 3832 3833 3834 3835 3836 3837 3838 3839 3840 3841 3842 3843 3844 3845 3846 3847 3848 3849 3850 3851 3852 3853 3854 3855 3856 3857 3858 3859 3860 3861 3862 3863 3864 3865 3866 3867 3868 3869 3870 3871 3872 3873 3874 3875 3876 3877 3878 3879 3880 3881 3882 3883 3884 3885 3886 3887 3888 3889 3890 3891 3892 3893 3894 3895 3896 3897 3898 3899 3900 3901 3902 3903 3904 3905 3906 3907 3908 3909 3910 3911 3912 3913 3914 3915 3916 3917 3918 3919 3920 3921 3922 3923 3924 3925 3926 3927 3928 3929 3930 3931 3932 3933 3934 3935 3936 3937 3938 3939 3940 3941 3942 3943 3944 3945 3946 3947 3948 3949 3950 3951 3952 3953 3954 3955 3956 3957 3958 3959 3960 3961 3962 3963 3964 3965 3966 3967 3968 3969 3970 3971 3972 3973 3974 3975 3976 3977 3978 3979 3980 3981 3982 3983 3984 3985 3986 3987 3988 3989 3990 3991 3992 3993 3994 3995 3996 3997 3998 3999 4000 4001 4002 4003 4004 4005 4006 4007 4008 4009 4010 4011 4012 4013 4014 4015 4016 4017 4018 4019 4020 4021 4022 4023 4024 4025 4026 4027 4028 4029 4030 4031 4032 4033 4034 4035 4036 4037 4038 4039 4040 4041 4042 4043 4044 4045 4046 4047 4048 4049 4050 4051 4052 4053 4054 4055 4056 4057 4058 4059 4060 4061 4062 4063 4064 4065 4066 4067 4068 4069 4070 4071 4072 4073 4074 4075 4076 4077 4078 4079 4080 4081 4082 4083 4084 4085 4086 4087 4088 4089 4090 4091 4092 4093 4094 4095 4096 4097 4098 4099 4100 4101 4102 4103 4104 4105 4106 4107 4108 4109 4110 4111 4112 4113 4114 4115 4116 4117 4118 4119 4120 4121 4122 4123 4124 4125 4126 4127 4128 4129 4130 4131 4132 4133 4134 4135 4136 4137 4138 4139 4140 4141 4142 4143 4144 4145 4146 4147 4148 4149 4150 4151 4152 4153 4154 4155 4156 4157 4158 4159 4160 4161 4162 4163 4164 4165 4166 4167 4168 4169 4170 4171 4172 4173 4174 4175 4176 4177 4178 4179 4180 4181 4182 4183 4184 4185 4186 4187 4188 4189 4190 4191 4192 4193 4194 4195 4196 4197 4198 4199 4200 4201 4202 4203 4204 4205 4206 4207 4208 4209 4210 4211 4212 4213 4214 4215 4216 4217 4218 4219 4220 4221 4222 4223 4224 4225 4226 4227 4228 4229 4230 4231 4232 4233 4234 4235 4236 4237 4238 4239 4240 4241 4242 4243 4244 4245 4246 4247 4248 4249 4250 4251 4252 4253 4254 4255 4256 4257 4258 4259 4260 4261 4262 4263 4264 4265 4266 4267 4268 4269 4270 4271 4272 4273 4274 4275 4276 4277 4278 4279 4280 4281 4282 4283 4284 4285 4286 4287 4288 4289 4290 |  |

**DESIGNATED FACILITY TO GENERATOR**  
PCI Synthesis, Inc.  
Newburyport, Massachusetts



**TRADEBE**  
Environmental Services™

## Driver's Worksheet

Order Number: 1421839

Manifest Number: 016743398JJK

|   |                                  |                            |                                |
|---|----------------------------------|----------------------------|--------------------------------|
| Start Date: 03/10/2017  | End Date: 03/10/2017             | Sales Office: 4030         | Thomas Clauro / Jennifer Wulff |
| Customer Number: 1100026539   | Stop Sample Needed:              |                            |                                |
| Customer: PCI Synthesis   |                                  |                            |                                |
| Site location: PCI Synthesis<br>9 Opportunity Way<br>Newburyport MA 01850 | Site Contact Name: PCI Synthesis | Phone Number: 978-462-5555 |                                |
| Appointment Time: 08:00:00  | Hours of Operation: 08:00-13:00  |                            |                                |

### Job Description

Customer prefers 1pm pick up, if needed earlier must let Tom Clauro know, he drops off labels, manifest, work order and LDR's prior to trip pick up. Also will need to confirm different time with Jonathan Goddard 978-462-4865.

### Lehr

| Item | Description          | Employee Name | Employee ID | Start Time | End Time |
|------|----------------------|---------------|-------------|------------|----------|
| 0010 | Pre-Trip             | John Texeira  | 2572        |            |          |
| 0020 | Travel (Customer)    |               |             |            |          |
| 0030 | Loading (Customer)   |               |             | 1:00       | 2:00     |
| 0040 | Travel (Facility)    |               |             |            |          |
| 0050 | Unloading (Facility) |               |             |            |          |
| 0060 | Post-Trip            |               |             |            |          |

### Transportation

| Item | Description | Unit Number | Odometer Start | Odometer End |
|------|-------------|-------------|----------------|--------------|
| 0010 | Tractor     | TE-72       |                |              |
| 0020 | Trailer     | ET-73       |                |              |

### Equipment / Material

| Item | Description | Unit | Quantity |
|------|-------------|------|----------|
|      |             |      |          |

### Comments:

### Signature:

|                             |                           |                            |
|-----------------------------|---------------------------|----------------------------|
| <br>Customer Signature/Date | Contract / POI : Required | <br>Tradebe Signature/Date |
|-----------------------------|---------------------------|----------------------------|

Signature verifies hours waiting and authorizes demurrage charges to be billed when applicable according to your quote as contract.



## Driver's Worksheet

Order Number: 1421832

Manifest Number: 010743382JJK

|   |                                  |                            |                               |
|---|----------------------------------|----------------------------|-------------------------------|
| Start Date: 03/10/2017  | End Date: 03/10/2017             | Sales Office: 4028         | Thomas Ciole / Jennifer Wolff |
| Customer Number: 1100020538   | Stop Sample Needed:              |                            |                               |
| Customer: PCI Synthesis   |                                  |                            |                               |
| Site location: PCI Synthesis<br>6 Opportunity Way<br>Newburyport MA 01850 | Site Contact Name: PCI Synthesis | Phone Number: 978-482-5558 |                               |
| Appointment Time: 09:00:00  | Hours of Operation: 09:00-13:00  |                            |                               |

### Job Description

Customer prefers 1pm pick up, if needed earlier must let Tom Ciole know, he drops off labels, manifest, work order and LOR's prior to the pick up. Also will need to confirm different time with Jonathan Goddard 978-482-4898.

### Labor

| Item | Description          | Employee Name | Employee ID | Start Time | End Time |
|------|----------------------|---------------|-------------|------------|----------|
| 0010 | Pre-Trip             | John T. Ciole | 112         |            |          |
| 0020 | Travel (Customer)    |               |             |            |          |
| 0030 | Loading (Customer)   |               |             | 1:00       | 2:00     |
| 0040 | Travel (Facility)    |               |             |            |          |
| 0050 | Unloading (Facility) |               |             |            |          |
| 0060 | Post-Trip            |               |             |            |          |

### Transportation

| Item | Description | Unit Number | Odometer Start | Odometer End |
|------|-------------|-------------|----------------|--------------|
| 0010 | Tractor     | 72-02       |                |              |
| 0020 | Trailer     | 01-03       |                |              |

### Equipment / Material

| Item | Description | UoM | Quantity |
|------|-------------|-----|----------|
|      |             |     |          |

### Comments:

### Signature:

|                             |                           |                            |
|-----------------------------|---------------------------|----------------------------|
| <br>Customer Signature/Date | Contract / POB : Required | <br>Tradebe Signature/Date |
|-----------------------------|---------------------------|----------------------------|

Signatures verify hours waiting and authorize demurrage charges to be billed when applicable according to your quote as contract.



**TRADEBE**  
Environmental Services™

## Driver's Worksheet

Order Number: 1421837

Manifest Number: 016743397JJK

|  |                                   |                            |                                |
|--|-----------------------------------|----------------------------|--------------------------------|
| Start Date: 03/10/2017   | End Date: 03/10/2017              | Sales Office: 4030         | Thomas Claire / Jennifer Wulff |
| Customer Number: 1100020550  | Stop Sample Needed:               |                            |                                |
| Customer: PCI Synthetics   |                                   |                            |                                |
| Site location: PCI Synthetics<br>8 Opportunity Way<br>Newburyport MA 01850 | Site Contact Name: PCI Synthetics | Phone Number: 978-493-5455 |                                |
| Appointment Time: 09:00:00   | Hours of Operation: 09:00-13:00   |                            |                                |

### Job Description

Customer prefers 1pm pick up, if needed earlier must let Tom Claire know, he drops off labels, manifest, work order and LDR's prior to the pick up. Also will need to confirm different time with Jonathan Goddard 978-493-4555.

### Labor

| Item | Description          | Employee Name | Employee ID | Start Time | End Time |
|------|----------------------|---------------|-------------|------------|----------|
| 0010 | Pre-Trip             | John Thomas   | 1577        |            |          |
| 0020 | Travel (Customer)    |               |             |            |          |
| 0030 | Loading (Customer)   |               |             | 1:00       | 2:00     |
| 0040 | Travel (Facility)    |               |             |            |          |
| 0050 | Unloading (Facility) |               |             |            |          |
| 0060 | Post-Trip            |               |             |            |          |

### Transportation

| Item | Description | Unit Number | Odometer Start | Odometer End |
|------|-------------|-------------|----------------|--------------|
| 0010 | TraCTOR     | TR-12       |                |              |
| 0020 | Trailer     | ET-13       |                |              |

### Equipment / Material

| Item | Description | UOM | Quantity |
|------|-------------|-----|----------|
|      |             |     |          |

### Comments:

### Signature:

Customer Signature/Date

Contract / PO# : Required

Tradebe Signature/Date

Signature verifies hours working and authorizes demurrage charges to be billed when applicable according to your quote or contract.



**TRADEBE**  
Environmental Services™

## Driver's Worksheet

Order Number: 1421836

Manifest Number: 0167433051JK

|   |                                  |                            |                                |
|---|----------------------------------|----------------------------|--------------------------------|
| Start Date: 03/10/2017  | End Date: 03/10/2017             | Sales Office: 4000         | Thomas Claire / Jennifer Wulff |
| Customer Number: 1100020559   | Stop Sample Needed:              |                            |                                |
| Customer: PCI Synthesis   |                                  |                            |                                |
| Site location: PCI Synthesis<br>9 Opportunity Way<br>Newburyport MA 01950 | Site Contact Name: PCI Synthesis | Phone Number: 978-482-6555 |                                |
| Appointment Time: 09:00:00  | Hours of Operation: 09:00-13:00  |                            |                                |

### Job Description

Customer prefers 1pm pick up, if needed earlier must let Tom Clairknow, he drops off labels, manifest, work order and LDR's prior to the pick up. Also will need to confirm different time with Jonathan Gendron 978-463-4355.

### Label

| Item | Description          | Employee Name | Employee ID | Start Time | End Time |
|------|----------------------|---------------|-------------|------------|----------|
| 0010 | Pre-Trip             | John Teixeira | 1273        |            |          |
| 0020 | Travel (Customer)    |               |             |            |          |
| 0030 | Loading (Customer)   |               |             | 1:00       | 2:00     |
| 0040 | Travel (Facility)    |               |             |            |          |
| 0050 | Unloading (Facility) |               |             |            |          |
| 0060 | Post-Trip            |               |             |            |          |

### Transportation

| Item | Description | Unit Number | Odometer Start | Odometer End |
|------|-------------|-------------|----------------|--------------|
| 0010 | Tractor     | TR 2        |                |              |
| 0020 | Trailer     | ET 3        |                |              |

### Equipment / Material

| Item | Description | UoM | Quantity |
|------|-------------|-----|----------|
|      |             |     |          |

### Comments:

### Signature:

|                             |                          |                            |
|-----------------------------|--------------------------|----------------------------|
| <br>Customer Signature/Date | Contract / PO's Required | <br>Tradebe Signature/Date |
|-----------------------------|--------------------------|----------------------------|

Signatures verifies hours waiting and authorizes demurrage charges to be billed when applicable according to your quote or contract.

PCB-20

MM

121 0008

AQ RD 230161  
5M1000



COMMONWEALTH OF MASSACHUSETTS  
EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

*Metropolitan Boston/Northeast Regional Office*

10 Commerce Way, Woburn, Massachusetts 01801, (617) 932-7600

ARGEO PAUL CELLUCCI  
Acting Governor

TRUDY COXE  
Secretary

DAVID B. STRUHS  
Commissioner

July 30, 1997

Mr. Hargovind Rathore  
Borregaard Synthesis  
9 Opportunity Way  
Newburyport, MA 01950

RE: NEWBURYPORT - Metropolitan  
Boston/Northeast Region  
310 CMR 7.02 Plan Approval  
Appl. No. MBR-97-IND-008  
Transmittal No. 118453  
Category: BWP AQ 02-Non Major  
Comprehensive Plan Application  
**AMENDED FINAL APPROVAL  
EMISSION RESTRICTIONS**

Dear Mr. Rathore:

The Metropolitan Boston/Northeast Region of the Department of Environmental Protection, Bureau of Waste Prevention, is hereby amending the Final Approval letter issued to you on June 19, 1997, to reflect changes requested by Borregaard Synthesis, Inc. regarding your facility located at 9 Opportunity Way, Newburyport, Massachusetts. The Amended Final Approval is presented below.

The Metropolitan Boston/Northeast Region of the Department of Environmental Protection, Bureau of Waste Prevention, has completed its technical review of your non-major Comprehensive Plan Application (nmCPA). Borregaard Synthesis, Inc. (Borregaard) has submitted this nmCPA application in response to the Civil Action No. 96-6773A, allowed by the courts on February 18, 1997. The Department's technical review of your application began on April 6, 1997. This application bears the seal and signature of Mr. James E. Gagnon, Massachusetts P.E. No. 29550.

In December 1996, Poly Organix, Inc., and the Commonwealth of Massachusetts entered into a Final Judgement that included as Exhibit A, a list of designated toxic use reduction measures identified in Poly Organix, Incorporated's Toxic Use Reduction Plan. These measures are being coordinated, outside of this permit, with the Department's Division of Hazardous Waste (see the report titled "Designated Toxic Use Reduction Measures Implementation Schedule" dated February 28, 1997).

On February 7, 1997, Borregaard purchased the assets of Poly Organix, Inc. Pursuant to paragraph 4 of the Final Judgement and the Motion to Substitute allowed by the court on February 18, 1997, Borregaard has submitted this nmCPA for: a) the existing facility; b) the proposed installation of new equipment for a product line known as 4-BBB; and c) additional air pollution control equipment.

Borregaard has requested facility-wide emission restrictions for volatile organic compounds (VOC), halogenated organic compounds (HOC), Hazardous Air Pollutants (HAP), and acids.

The Department has determined that your application is administratively and technically complete and that the described processes are in conformance with current air pollution control engineering practices. Therefore, the Department hereby grants an Amended Final Approval for this nmCPA, subject to the below listed conditions.

Please review the entire Amended Final Approval carefully, as it stipulates the particular conditions with which the facility owner/operator must comply in order for the facility to be operated in compliance with the Regulations. Failure to comply with this Amended Final Approval will constitute a violation of the Regulations and can result in the revocation of the Amended Final Approval.

## A. FACILITY DESCRIPTION

Borregaard manufactures a variety of specialty organic chemicals. The subject facility is a multipurpose, batch chemical processing plant, designed for maximum versatility. A broad range of chemicals are produced, in relatively low quantities to serve the pharmaceutical, epoxy, photo-sensitive chemical, and agro-chemical markets.

The typical manufacturing process involves charging raw materials to a reactor, where they undergo chemical reaction(s) then filtration, distillation or product purification, and drying. First, solvents and/or water are introduced into a closed, jacketed stainless steel Hastelloy, or glass-lined, agitated reactor by pump or vacuum in a nitrogen atmosphere. Dry chemicals are then charged into the reactor through a manway. The manway is then sealed and the reaction is initiated by agitation and/or steam jacketed heat. When the reaction is complete, the contents are cooled, generally by the introduction of chilled water through the cooling jacket. The resultant slurry is then transferred through a closed piping system to a holding vessel via a filter or a centrifuge.

Certain products may require filtration to remove particles or to improve purity. In a typical separation washing process, the reaction slurry is pumped to an enclosed centrifuge or filter where the solids are separated from the liquid phase. The solids are washed with water or solvents. After washing, the resultant solid products may be retained as an intermediate product or conveyed to the dryer area for final processing.

Waste mother liquors are collected in a tank and are disposed of off-site as hazardous waste, or they are reused in subsequent processes. Prior to each process, the inside of the reactor is cleaned with solvents and/or water and the waste is collected for off-site disposal. In addition, wastewater generated by floor washing and cleaning of equipment exteriors is treated on-site and then discharged into the City of Newburyport sewer system under Permit No. 188. This wastewater is tested prior to discharge to ensure compliance with the Permit's effluent limitations. The facility uses its warehouse space for raw materials and finished goods storage.

## B. PROCESS DESCRIPTION

The chemical operations are carried out at temperatures ranging from -20 degrees F to 600 degrees F, and pressures ranging from 29 inches of mercury vacuum to 15 pounds per square inch.

Appendix-A of the plan application contains a list of all raw materials used at the subject facility, and major finished products shipped, at the time of this application.

#### Existing Equipment

The existing facility utilizes twenty one (21) process tanks for manufacturing specialty chemicals. The tanks serve as reaction vessels, distillate receivers, and surge/feed tanks. In addition to the above tanks, the operation includes five vacuum tray dryers, a rotary dryer, an atmospheric dryer, a centrifuge, a filter press, various filter funnels, and associated ancillary equipment such as pumps and condensers. Figure 2 in Appendix H of the Plan application presents the equipment layout of the existing manufacturing area. Appendix-A of the application contains a detailed list of existing equipment designations, functions, vessel sizes, and materials of construction.

#### Proposed New Equipment

As indicated in the plan application, Borregaard is considering the installation of new equipment for production of 4-BBB. The proposed addition of new equipment for this product line will include: not more than one (1) new reactor; not more than eight (8) new process vessels for solvent recovery, crystallization and raw material storage for recycling; not more than one (1) new distillation column; totally enclosed pressure filtration equipment and associated condensers; pumps; and material handling equipment. Based upon market demands, Borregaard may not install or utilize all of the new equipment described above. In addition, Borregaard has set aside space at its Newburyport facility to accommodate future process equipment installations, and will submit appropriate pre-construction plan applications to the Department, when necessary.

Figure 3 in Appendix-H of the plan application presents the equipment layout of the new 4-BBB production area. Appendix-A of the plan application contains a detailed list of 4-BBB production equipment designations, functions, vessel sizes, and materials of construction.

### C. COMBUSTION EQUIPMENT

The subject facility houses an existing, approved, natural gas fired Kewanee H35-100-GO6 boiler, (Approval No. MBR-88-COM-042), having a maximum rated energy input capacity of 4,185,000 British Thermal Units (Btu) per hour. The boiler uses natural gas as the only fuel of use, at a maximum rate of 4185 cubic feet per hour.

The products of combustion from this boiler are emitted vertically through a 14 inch diameter stainless steel stack. The top of the stack is 5 feet above the building roof and 24 feet above the ground. The maximum stack gas exit velocity is 20 feet per second at 425 degrees F. The exhaust gases exit vertically, and will not be impeded by any rain hat device.

### D. EMISSIONS AND AIR POLLUTION CONTROL EQUIPMENT

Borregaard utilizes various batch chemical processes and a constantly changing mix of products, so the following method is used to quantify potential emissions from the subject facility. VOC/HOC emission rates associated with the batch chemical processing operations are estimated based upon the "model plant" approach detailed by US EPA in the document titled "Control of Volatile Organic Compound Emissions from Batch Processes" dated February, 1994. The facility-wide actual emissions of VOC/HOC/HAP will be established based upon the above USEPA document and the following:

1. A requirement to process VOC/HOC/HAP with vapor pressures greater than 150 millimeters of mercury at 70 degrees F, in reactors that are equipped with condensers operated at a maximum, chilled fluid temperature of minus seven (-7) degrees Celsius.
2. Equipping the vacuum dryers with condensers operated at a maximum, chilled fluid temperature of -7 degrees Celsius.

#### ACID GAS SCRUBBER, CONDENSER, AND PROCESS STACK

All vessels, dryers, tanks, and filtration processes which exhaust acids are vented through an existing, Otto H. York Co., Custom Design, catenary grid, acid gas scrubber. Reactions with high evolution rates of acid gases are pre-scrubbed separately prior to being vented to this scrubber. This scrubber is countercurrent design, with a cross sectional area of 4.28 square feet and a height of 15.7 feet. The scrubber consists of three sets of York polypropylene catenary grids and a Chevron type demister, with a nominal pressure drop across the scrubber of 6 inches of water column. The scrubber is rated at a maximum capacity of 4,500 actual cubic feet per minute (acfm, wet) at 77 degrees F.

The maximum inlet acid loading to the scrubber is 300 pounds per hour, while the maximum controlled emission rate at the stack outlet is 6 pounds per hour. The scrubbing liquid is an aqueous solution of 10 percent by weight sodium hydroxide, recirculated at a maximum rate of 100 gallons per minute. The pH is automatically maintained between 12 and 13 by addition of sodium hydroxide solution. The scrubber has an overall acid gas control efficiency of 98 percent by weight. The facility-wide potential emissions of acid gases, after control, are less than 1 ton per year.

The exhaust gases from scrubber are vented vertically through an 18 inch diameter vertical stack with an inside and outside shell material of fiberglass reinforced plastic. The height of stack exit is 20 feet above the building roof and 45 feet above the ground. The maximum stack gas exit velocity is 45 feet per second at 120 degrees F. The exhaust gases exit vertically, and will not be impeded by any rain hat device.

For chilled condensation of vacuum dryer exhausts, each associated condenser will have an overall VOC control efficiency of 80 percent by weight, based on an average vapor pressure reduction from 20 degrees C to -7 degrees C.

Table I below specifies the maximum allowable facility-wide emission limitations for total VOC, HOC, acids, and HAP. (See also Special Condition Nos. 2, 3, 4, and 5, in Section E below.)

TABLE I Allowable Emissions

| Air Contaminant               | Allowable Monthly<br>Emission Limit<br>(Tons per Month) | Allowable Annual<br>Emission Limit<br>(Tons per 12 Month<br>Rolling Period) |
|-------------------------------|---|---|
| Acid Gases                    | 0.5   | 1.0   |
| Hazardous Air Pollutants      | 3.3   | 6.6   |
| Halogenated Organic Compounds | 2.0   | 4.0   |
| Volatile Organic Compounds    | 5.4   | 10.8  |

## E. SPECIAL CONDITIONS

- no records*
1. This Approval supersedes previous Approval Nos. MBR-88-COM-042 (existing boiler) and MBR-89-IND-006 (acid gas scrubber) and amends the June 19, 1997, Final Approval, Application Number MBR-97-IND-008.
  2. Borregaard shall limit its facility-wide VOC emissions to no more than 10.8 tons per rolling 12 month period and 5.4 tons per month.
  3. Borregaard shall limit its facility-wide HOC emissions to no more than 4.0 tons per rolling 12 month period and 2.0 tons per month.
  4. Borregaard shall limit its facility-wide total HAP emissions to no more than 6.6 tons per rolling 12 month period and 3.3 tons per month. New individual HAPs may be introduced or interchanged provided that the total HAP limits specified above are complied with.
  5. Borregaard shall limit its facility-wide acid gas emissions to no more than 1.0 tons per rolling 12 month period and 0.5 tons per month.
  6. Borregaard shall maintain monthly and 12 month rolling period records of usage of raw materials at the facility to track and document compliance with the above VOC, HOC, and HAP limitations. Borregaard shall maintain material safety data sheets (MSDS) on-site for all chemicals used at the facility.
  7. Borregaard shall comply with the above monthly and 12 month rolling period limitations. An annual compendium of the latest 12 month VOC, HOC, and HAP emissions must be submitted to this office, attention Permit Chief for the Bureau of Waste Prevention, by the 30th of January of the following year. Adequate records to demonstrate compliance with the requirements contained in Special Condition Nos. 2, 3, 4, and 5 above shall be kept on site for a minimum of five years and shall be made available to Department and/or EPA personnel upon request.
  8. Borregaard shall demonstrate the minimum overall acid gas control efficiency of 98 weight percent for the subject scrubber system, and the minimum overall VOC control efficiency of 80 weight percent for each subject condenser, when and if, in the opinion of the Department, such is deemed necessary.
  9. Borregaard shall follow the Standard Operating and Maintenance Procedures (SOMP) described in Appendix-G of the plan application, for the operation and maintenance of the subject scrubber system.
  10. Borregaard shall post at or nearby each control device a copy of its SOMP. *→ not posted nearby*
  11. If any control device upset occurs which prevents Borregaard from operating the control device(s) properly (i.e. a minimum, overall acid gas control efficiency of 98 weight percent for the subject scrubber system and a minimum, overall VOC control efficiency of 80 weight percent for each subject condenser), then Borregaard shall complete only the batch reaction in question and immediately thereafter discontinue operation of the process in a safe and efficient manner to prevent a condition of air pollution, until the control device in question is repaired and operating properly.

12. Should any of the above described control devices become inoperable, for any reason, Borregaard shall notify the Department within 24 hours by fax at (617)932-7615 and subsequently in writing within seven (7) days of occurrence describing the reason(s) for and the extent of downtime of the equipment and all steps that have been or will be taken to prevent said occurrence from recurring.
13. Borregaard shall use natural gas as the only fuel of use for the subject boiler described in the Section C above. The particulate emission rate from the subject boiler shall not exceed 0.1 pounds per million Btu at any firing rate.

## F. GENERAL CONDITIONS

1. Borregaard shall notify this Regional Office in writing when the installation of the new equipment is complete and the equipment is ready for continuous operation.
2. That should any nuisance condition(s) occur as a result of the operation of this process, then Borregaard shall immediately take appropriate steps to abate said nuisance condition(s).
3. Borregaard shall continue to investigate the feasibility of implementing alternative technologies or reformulated raw material inputs which will lead to the decrease of overall emissions from the subject facility to the environment. The facility shall seek assistance from outside sources such as suppliers, vendors, or the Office of Technical Assistance (which is located at the Executive Office of Environmental Affairs, 100 Cambridge Street, Boston, Massachusetts, Telephone No. 617-727-3260). Borregaard personnel shall record any information supplied to them relative to reducing overall emissions and pollution prevention techniques. This information as well as any progress toward decreasing overall emissions to the environment shall be recorded in the facility's Environmental Logbook (see General Condition No. 4 below).
4. *has one*  
Borregaard shall maintain an Environmental Logbook which shall document all actions associated with environmental issues and overall emissions changes at the facility. The facility shall record information such as the results of federal, state, or local environmental inspections and measures taken to lower overall emissions to the environment. This Logbook shall be made available to Department personnel upon request.
5. Borregaard can implement formulation changes, equipment changes, and/or relocations of equipment which reduce air emissions in order to achieve the goals of toxic use reduction, VOC/HOC/HAP reduction, or waste minimization without requiring a modification to this approval. Any modification or new equipment installation which increases emissions by greater than one ton per year shall comply with the applicable requirements of Regulation 310 CMR 7.00 (Sections 7.02, 7.03, etc.). Any other modifications (such as moving equipment for increased efficiency, changing additives, or Statement Forms as required by Regulation 310 CMR 7.12 (see Special Condition No. 6 below). These modifications cannot violate the conditions of this Approval, such as the VOC, HOC, and HAP emission restrictions contained herein.
6. Borregaard shall accurately report the facility's air emissions on Emission Statement Forms as required by Regulation 310 CMR 7.12. The facility shall attach a summary sheet to the Emission Statement forms outlining any progress the facility has made towards lowering overall emissions (air, water, hazardous waste, etc.) to the environment. The facility shall note any minor changes which did not require plan approval under Regulation 310 CMR 7.00 (Sections 7.02, 7.03, etc.) therein.

7. This Final Approval consists of the application materials and this Approval letter. If conflicting information is found between these two documents, then the requirements of this Approval letter shall take precedence over the documentation in the application materials.
8. Please be advised that this Final Approval does not negate the responsibility of Borregaard to comply with this or any other applicable federal, state, or local regulations now or in the future. Nor does this approval imply compliance with any other applicable federal, state, or local regulations now or in the future.
9. Borregaard shall allow Department personnel access to the plant site, buildings, and all pertinent records at all times for the purpose of making inspections and surveys, collecting samples, obtaining data, and reviewing records.
10. This Final Approval may be suspended, modified, or revoked by the Department if, at any time, the Department determines that Borregaard is violating any condition or part of this Approval. The Department may also revoke this approval if the construction work is not begun within two years from the date of issuance of this approval, or if the construction work is suspended for one year or more.
11. The Northeast Regional Bureau of Waste Prevention office, attention Compliance and Enforcement Chief, must be notified by telephone as soon as possible after the occurrence of any upsets or malfunctions to the facility equipment, which result in an excess emission to the air and a condition of air pollution.
12. The Department has determined that the filing of an Environmental Notification Form (ENF) with the Secretary of Environmental Affairs, for air quality control purposes, was not required prior to this action by the Department. Notwithstanding this determination, the Massachusetts Environmental Policy Act (MEPA) and Regulation 301 CMR 11.00, Section 11.03, provide certain "Fail-Safe Provisions" which allow the Secretary to require the filing of an ENF and/or an Environmental Impact Report at a later time.

\* \* \* \* \*

This plan approval is an action of the Department. If you are aggrieved by this action, you may request an adjudicatory hearing. A request for a hearing must be made in writing and postmarked within twenty-one (21) days of the date you received this plan approval.

Under 310 CMR 1.01(6)(b), the request must state clearly and concisely the facts which are the grounds for the request, and the relief sought. Additionally, the request must state why the plan approval is not consistent with applicable laws and regulations.

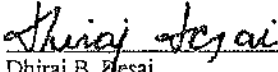
The hearing request along with a valid check payable to the Commonwealth of Massachusetts in the amount of one hundred dollars (\$100.00) must be mailed to:

Commonwealth of Massachusetts  
Department of Environmental Protection  
P.O. Box 4062  
Boston, MA 02211

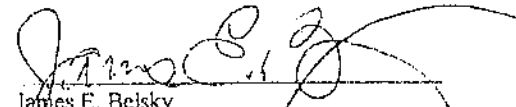
This request will be dismissed if the filing fee is not paid, unless the appellant is exempt or granted a waiver as described below. The filing fee is not required if the appellant is a city or town (or municipal agency), county, or district of the Commonwealth of Massachusetts, or a municipal housing authority.

The Department may waive the adjudicatory hearing filing fee for a person who shows that paying the fee will create an undue financial hardship. A person seeking a waiver must file, together with the hearing request as provided above, an affidavit setting forth the facts believed to support the claim of undue financial hardship.

Should you have any questions concerning this matter, please do not hesitate to contact Mr. Dhiraj B. Desai at (617)932-7600.

  
Dhiraj B. Desai  
Environmental Engineer

Sincerely,

  
James E. Belsky  
Permit Chief  
Bureau of Waste Prevention

cc: Board of Health, City Hall, Newburyport, MA 01950  
Fire Headquarters, Greenleaf St., Newburyport, MA 01950  
DEP, DAQC, One Winter St., 7th Floor, Boston, MA 02108 ATTN: W. Sullivan  
DEP, NERO, ATTN: T. Parks, M. Hancock, D. Desai  
James Gagnon, 264 Cottage St., Springfield, MA 01104



## TRADEBE TREATMENT AND RECYCLING, LLC

P110512021

Profile #

## GENERATOR WASTE STREAM PROFILE SHEET

Fax or email completed profile sheet to:

TTR Fax: 219-397-6411

UIS Fax: 203-238-6744

Process Code

usa.aporovals@tradebe.com

## A. GENERATOR INFORMATION:

## MAILING OR SITE ADDRESS

USE CONTINUATION IF SITE &amp; MAILING ADDRESSES ARE DIFFERENT

Generator #:

Generator Name: PCI Synthesis Inc

Generator Address: 9 opportunity Way

City: Newburyport State: MA Zip: 01950

Contact Name: Bill Anderson

Generator Phone: 978-463-4882

Generator Fax:

Generator Email: Bill.anderson@pcisynthesis.com

Generator USEPA/Federal ID #: MAR000007955

If no ID number is the Generator a "Conditionally Exempt Small Quantity Generator?"

Yes ☐ No ☒

Generator SIC (or NAIC) Code: 2865

Generator State ID # (if applicable):

Please check if generator has "No Canada Disposal" policy

Yes ☐ No ☐

Please check if generator has "No Landfill" policy

Yes ☐ No ☐

## CUSTOMER INFORMATION:

Customer #:

Customer Name:

Customer Address:

City: State: Zip:

Contact Name:

Customer Phone:

Customer Fax:

Customer Email:

Customer Service/Sales Rep: Tom Claire

## B. WASTE STREAM INFORMATION:

Generator's Waste Name: LRP

Original Process Generating Waste: Seal fluid from liquid ring vacuum pump at chemical processing plant

Is this waste exempt from RCRA regulation?

Yes ☐ No ☒

If "yes" explain or cite regulation on continuation (Example HHW, CESQG):

Current method of disposal:

Is this waste from a CERCLA cleanup site?

Yes ☐ No ☒Waste determination was made by: Testing ☐ Generator Knowledge ☒ MSDS ☐ Sample ☐ Other ☐

(Attach analytical, MSDS, or other supporting documentation used for waste determination)

Does the Waste have any of the following characteristics?

Yes (if yes check all that apply) No

☐ Oxidizer ☐ Dioxin or Suspect ☐ Water Reactive ☐ Air Reactive ☐ Organic Peroxide☐ Hexachrome ☐ Infectious Waste ☐ Radioactive ☐ Chelating Agent ☐ Lachrymator☐ Explosive ☐ Shock Sensitive ☐ Polymerizer ☐ Pyrophoric ☐ Inhalation Hazard, Zone

## C. GENERAL CHARACTERISTICS:

Color: clear Physical state @ 70 F Phases BTU/lb pH  
Odor: 100 % liquid aerosol single layer <3000 (Ex: water) <2 (Acid) 10.0-12.5  
x None % solid powder double layer x 3,000-5,000 2.0-4.0 x >12.5 (Base)  
Mild % sludge other >2 layers 5,000-10,000 4.0-10.0  
Strong % debris how many? >10,000 (Ex: oil)

Liquid Flashpoint: x <73 F 73 to 99 F 100 to 139 F 140 to 200 F >200 F None  
Boiling Point >=130 Specific Gravity: 1.0-1.1 Total Halogens: % Total Organic Carbon (TOC): >=10 % Viscosity: 1-100

## D. CHEMICAL COMPOSITION: Total of Maximum concentration must be &gt; or = to 100%.

| Constituents  | Min% | Max% | ppm | Constituents           | Min% | Max% | ppm |
|---------------|------|------|-----|------------------------|------|------|-----|
| acetone       |      | 2    |     | methanol               |      | 2    |     |
| ethanol       |      | 2    |     | methyl isobutyl ketone |      | 2    |     |
| ethyl acetate |      | 2    |     | methylene chloride     |      | 2    |     |
| heptane       |      | 2    |     | sodium hydroxide       |      | 20   |     |
| isopropanol   |      | 2    |     | tetrahydrofuran        |      | 2    |     |

Does the Waste contain any of the following?

Metal Pieces: Yes ☒ No ☐ If yes, Describe Metal: 80-99Nitrocellulose: Yes ☒ No ☐ Metal Powder or Flake: Yes ☒ No ☐ Sharps: Yes ☒ No ☐Isocyanates: Yes ☒ No ☐ Asbestos: (If yes, must be double bagged and wetted) Yes ☒ No ☐Reactive cyanide: (If yes, indicate level in ppm) Yes ☒ No ☐ Range of reactive cyanideReactive sulfide: (If yes, indicate level in ppm) Yes ☒ No ☐ Range of reactive sulfide

PCBs: x None 0-49 ppm 50-499 ppm 500+ ppm (If waste contains PCBs, certification form is required)

Does the waste contain Benzene?

Yes ☐ No ☒

If yes, check all SIC codes that cover operations at your facility

Yes ☐ No ☒

2812 2813 2816 2819 2821 2822 2823 2824 2833 2834 2835 2836 2841 2842 2843 2844 2851 2861

2865 2869 2873 2874 2875 2879 2891 2892 2893 2895 2899 2911 2999 3312 4953 4959 9511

If waste contains benzene and falls under one of the above SIC codes, Tradebe's benzene NESHAP form is required for each shipment

rev Tradebe 5-21-2012

| WASTE WATER ANALYSIS   |                 |              |               |                 |              | Profile # <u>LRP</u> |                 |              |
|--|-----------------|--------------|---------------|-----------------|--------------|----------------------|-----------------|--------------|
| For waste streams being managed through United's wastewater treatment operations only: |                 |              |               |                 |              |                      |                 |              |
| Phases:  | Oil             | % Water      | % Interface   | % Sediments     | % DNAPL      |                      |                 |              |
| Potroleum Phase  | Suspected Level | Actual Level | Aqueous Phase | Suspected Level | Actual Level | Aqueous Phase        | Suspected Level | Actual Level |
| PCB  |                 |              | Copper        |                 |              | Cobalt               |                 |              |
| Halogens   |                 |              | Cadmium       |                 |              | Mercury              |                 |              |
| Solvents   |                 |              | Chromium      |                 |              | Arsenic              |                 |              |
| Arsenic  |                 |              | Lead          |                 |              | Barium               |                 |              |
| Cadmium  |                 |              | Nickel        |                 |              | Sulfides             |                 |              |
| Chromium   |                 |              | Silver        |                 |              | Cyanides             |                 |              |
| Lead   |                 |              | Zinc          |                 |              | Phenols              |                 |              |
|  |                 |              | COD           |                 |              | Glycols              |                 |              |
|  |                 |              | Iron          |                 |              | Selenium             |                 |              |

List Specific Solvents: \_\_\_\_\_

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**E. OTHER WASTE STREAM INFORMATION:**

Is this waste a USED OIL per 40CFR PART 279? ☐ Yes ☒ No

If Yes, does the total halogen content exceed 1,000 ppm? ☐ Yes ☒ No

If Yes, can you identify the Chlorinated Constituent present in the oil? ☐ Yes ☒ No

If Yes, can you rebut the presumption that this material is a Hazardous Waste? ☐ Yes ☒ No

Is the Waste subject to RCRA 40 CFR Subpart CC controls (Are Volatile Organic Compounds >500ppmw)? ☒ Yes ☐ No

Does the Waste contain any Class I or Class II ozone-depleting substances? ☐ Yes ☒ No

Does waste contain EPCRA 313 chemicals identified in 40 CFR 372.65? ☐ Yes ☒ No

If yes list in Additional Information on Continuation Page.

Does this waste contain any Chemicals of Interest listed in 6 CFR Part 27 Appendix A (Department of Homeland Security)? If yes please list in Additional Information on Continuation Page. ☐ Yes ☒ No

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**F. RCRA CHARACTERIZATION:**

Is this a USEPA Hazardous Waste as defined in 40 CFR 261.3? ☒ Yes ☐ No

Is this a Universal Waste per 40 CFR part 273? ☐ Yes ☒ No

Please list any characteristic codes (D001-D043): D001,D002,F002, F005

Does the waste contain UHCs above treatment standards levels? (40 CFR 268.46, 268.7) ☐ Yes ☒ No

If yes identify those chemicals in Appendix I - Underlying Hazardous Constituents

Please list any applicable "F" or "K" codes: F002,F005

Please list any applicable "U" or "P" codes: \_\_\_\_\_

Please list any state regulated codes: \_\_\_\_\_

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**G. SHIPPING VOLUME & FREQUENCY:**

☐ Bulk Liquid (tanker) \_\_\_\_\_ Approximately how many gallons? \_\_\_\_\_ Bulk Solids (roll-off box, vacuum box, etc) \_\_\_\_\_

☐ Cubic Yard Boxes \_\_\_\_\_ Totes \_\_\_\_\_ size in gallons \_\_\_\_\_ Metal \_\_\_\_\_ Plastic \_\_\_\_\_

☐ Skid \_\_\_\_\_ Other If other, please describe: \_\_\_\_\_

☒ Drums (Specify size) 85 ☒ 55 ☐ 30 ☐ 15 ☐ 5 Metal ☒ Plastic \_\_\_\_\_ Fiberboard \_\_\_\_\_

Is waste a combination package (e.g. Drum with inner containers or skid with cases of consumer products) ☐ Yes ☐ No

Shipping Frequency: Number of Units 2 Per ☒ Month ☐ Quarter ☐ Year ☐ Other \_\_\_\_\_

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**H. DOT SHIPPING INFORMATION**

Is this a U.S. Department of Transportation (USDOT) Hazardous Material? ☒ Yes ☐ No

Shipping Name per 49 CFR 172.101 Hazardous Materials Table: UN3285, waste flammable liquid, toxic, corrosive, N.O.S.

(acetone, methylene chloride, sodium hydroxide)

Hazard Class or Division: 3 UN/NA #: 3286 Packing Group: I ☒ II ☐ III ERG #: \_\_\_\_\_

Technical descriptors if required: \_\_\_\_\_ RQ if required: \_\_\_\_\_

DOT Special Permit that may apply (include copy of permit): \_\_\_\_\_ Inhalation Hazard: Zone \_\_\_\_\_

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**I. GENERATOR CERTIFICATION:**

I agree by affixing my authorized signature that I hereby certify that the above and attached description is complete and accurate and that no omissions of characterization, composition or properties exist and that all known or suspected hazards have been disclosed. I also certify that each sample provided to Tradebe is representative of the waste material described above and give Tradebe permission and consent to make amendments and corrections and that I am an authorized agent of the Generator.

Name(print): Bill Anderson Title: EHS MANAGER

Signature: [Signature] Date: 11.1.12

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**INTERNAL USE ONLY: Please indicate which Tradebe Facility(s) are being utilized for this Profile**

|   |   |  |
|---|---|--|
| <input type="checkbox"/> TTR, LLC, East Chicago, IN                 | <input type="checkbox"/> TTR of TN, LLC, Millington, TN | <input type="checkbox"/> United Oil Recovery, Inc. Meriden, CT   |
| <input type="checkbox"/> Bridgeport United Recycling Bridgeport, CT | <input type="checkbox"/> Zecca Northboro, MA            | <input type="checkbox"/> United Oil Recovery, Inc. Newington, NH |
| <input type="checkbox"/> ECC Sloughon, MA                           | <input type="checkbox"/> Mobile Corp Cohoes, NY         |  |

TRADEBE TREATMENT AND RECYCLING, LLC LRP

Profile # rev Tradebe 5-21-2012

Permit No. 287CITY OF NEWBURYPORT  
INDUSTRIAL DISCHARGE PERMIT

In accordance with the provisions of (Sec. 14-83 of the Sewer Use Ordinance).

Permittee: PCI SynthesisLocation address: 9 Opportunity Way Newburyport Ma, 01950Mailing address: Same

Is hereby authorized to discharge Industrial Wastewater from the above identified facility and through the outfalls identified herein into the City of Newburyport sewer system in accordance with the conditions set forth in this permit. Compliance with this permit does not relieve the permittee of its obligation to comply with any or all applicable pretreatment regulations, standards or requirements under Local, State, and Federal laws, including any such regulations, standards, requirements, or laws that may become effective during the term of this permit.

Noncompliance with any term or condition of this permit shall constitute a violation of the City of Newburyport Sewer Use Ordinance.

This permit shall become effective on 10-29-2014 and shall expire at midnight on 10-29-2017.

If the permittee wishes to continue to discharge after the expiration date of this permit, an application must be filed for a renewal permit in accordance with the requirements of Sec. 14-83 of the Sewer Use Ordinance, a minimum of 180 days prior to the expiration date.

Issued this 29 th day of OCTOBER, 2014.Pretreatment Coordinator Paul M. [Signature]Facility Representative Bill Ardu EHS MANAGER 10/29/14

## PART 1 - EFFLUENT LIMITATIONS

A. During the period beginning on the Effective Date of the permit until 10-29-2017 the permittee is authorized to discharge process wastewater to the City of Newburyport Sewer system from the outfalls listed below.

Description of outfalls:

| Outfall No. | Descriptions                                    |
|-------------|---|
| 001         | -Process discharge from 5,000 gal holding tank. |
| 002         | -Domestic sanitary discharge only.              |

B. During the period beginning on the Effective Date of the permit until 10-29-2017 the discharge from Outfall No. 001 shall not exceed the following effluent limitations. Effluent from this outfall consists of:

Lab, plant equipment wash down and floor wash down.  
Maximum 7,500 gpd discharge allowed  
Please see the following pages 2a and 2b for additional effluent  
Limits.

### EFFLUENT LIMITATIONS

| Parameter | Daily maximum (mg/L) | Monthly average (mg/L) |
|-----------|----------------------|------------------------|
| Cadmium   | 0.055                | 0.26                   |
| Chromium  | 3.0                  | 1.71                   |
| Copper    | 1.90                 | 2.07                   |
| Lead      | 0.60                 | 0.43                   |
| Nickel    | 0.62                 | 2.38                   |
| Silver    | 0.5                  | 0.24                   |
| Zinc      | 2.02                 | 1.48                   |
| Cyanide   | 0.65                 | 0.65                   |
| T.T.O.    | 2.13                 |                        |
| pH        | 6.0 Min. to 11.0 max |                        |
| BOD       | 375.0                |                        |
| TSS       | 300.0                |                        |



2B

| parameter              | 5000 | conc mg/l | conc ug/l | flow mgd | mg    | mg/l  | ug/l | max day | max mth | ug/l | max mth | lbs allow |
|------------------------|------|-----------|-----------|----------|-------|-------|------|---------|---------|------|---------|-----------|
| Aethylene Chloride     | 5000 | 0.17      | 0.00017   | 0.005    | 0.17  | 0.036 | 170  | 0.47    | 38      | 47   | 19      | 0.007089  |
| Isophtalene            | 5000 | 0.047     | 0.000047  | 0.005    | 0.047 | 0.019 | 47   | 6.402   | 2237    | 6402 | 2237    | 0.286863  |
| 4-Tolubenzene          | 5000 | 6.402     | 0.006402  | 0.005    | 6.402 | 2.237 | 231  | 0.231   | 66      | 231  | 66      | 0.0098333 |
| 2-Nitrophenol          | 5000 | 0.231     | 0.000231  | 0.005    | 0.231 | 0.162 | 576  | 0.576   | 162     | 576  | 162     | 0.024019  |
| 4-Nitrophenol          | 5000 | 0.576     | 0.000576  | 0.005    | 0.576 | 0.019 | 47   | 0.047   | 19      | 47   | 19      | 0.00196   |
| Phenanthrene           | 5000 | 0.047     | 0.000047  | 0.005    | 0.047 | 0.02  | 48   | 0.048   | 20      | 48   | 20      | 0.002002  |
| Pyrene                 | 5000 | 0.048     | 0.000048  | 0.005    | 0.164 | 0.052 | 164  | 0.164   | 52      | 164  | 52      | 0.006839  |
| Tetrachloroethylene    | 5000 | 0.164     | 0.000164  | 0.005    | 0.074 | 0.028 | 74   | 0.074   | 28      | 74   | 28      | 0.003086  |
| Colulene               | 5000 | 0.074     | 0.000074  | 0.005    | 0.65  | 0.42  | 1200 | 0.65    | 420     | 1200 | 420     | 0.027105  |
| Total Cyanide          | 5000 | 0.65      | 0.00065   | 0.005    | 0.6   | 0.32  | 690  | 2.02    | 320     | 690  | 320     | 0.02502   |
| Total Lead             | 5000 | 0.6       | 0.0006    | 0.005    | 2.02  | 1.05  | 2610 | 0.794   | 1060    | 2610 | 1060    | 0.084234  |
| Total Zinc 2           | 5000 | 2.02      | 0.00202   | 0.005    | 0.794 | 0.196 | 794  | 0.059   | 196     | 794  | 196     | 0.03311   |
| 1,2,4-Trichlorobenzene | 5000 | 0.794     | 0.000794  | 0.005    | 0.059 | 0.022 | 59   | 0.127   | 22      | 59   | 22      | 0.00246   |
| 1,1,1-Trichloroethane  | 5000 | 0.059     | 0.000059  | 0.005    | 0.127 | 0.032 | 127  | 0.069   | 32      | 127  | 32      | 0.005296  |
| 1,1,2-Trichloroethane  | 5000 | 0.127     | 0.000127  | 0.005    | 0.069 | 0.026 | 69   | 0.172   | 26      | 172  | 26      | 0.002877  |
| Trichloroethylene      | 5000 | 0.069     | 0.000069  | 0.005    | 0.172 | 0.097 | 172  | 1.9     | 97      | 3380 | 1460    | 0.007172  |
| Vinyl Chloride         | 5000 | 0.172     | 0.000172  | 0.005    | 1.9   | 1.45  | 3380 | 1.9     | 1460    | 3380 | 1460    | 0.07923   |
| Copper                 | 5000 | 1.9       | 0.0019    | 0.005    |       |       |      |         |         |      |         |           |

2B

C. For the period beginning on the Effective Date of the permit until 10-29-2017 the effluent from outfall 002 shall be of domestic or nonprocess wastewater only and shall comply with Sections 14-71, 14-72, 14-73, and Sec. 14-74 of the City of Newburyport Sewer Use Ordinance.

D. The permittee shall not discharge wastewater containing any of the following substances from any of the outfalls:

1. Fats, wax, grease, or oils of petroleum origin, whether emulsified or not, in excess of one hundred (100) mg/L or containing substances which may solidify or become viscous at temperatures between 32 degrees F (0 degrees C) and 140 degrees F (60 degrees C);

2. Any gasoline, benzene, naphtha, fuel oil or other flammable or explosive liquids, solids or gases;

3. Any effluent having a temperature higher than 104 degrees F (40 degrees C);

4. Any ashes, hair, cinders, sand, mud, straw, shavings, metal, glass, rags, feathers, tar, plastics, wood, paunch, manure, or any other solids capable of causing obstruction to the flow in sewers, or other interference with proper operation of the sewage treatment works;

5. Any pollutant, including oxygen demanding pollutants (Bod) etc.) At flow rate and/or concentration which will cause the pollutants to pass through to the receiving waters or interfere with the City of Newburyport wastewater treatment facility. For the purpose of this section, the terms "pass through" and "interference" have the same definitions as appear in the City Sewer Use Ordinance, Sec. 14-26 Definitions.

E. All discharges shall comply with all other applicable laws, regulations, standards, and requirements contained in Sections 14-73, 14-74 of the Sewer Use Ordinance, and any applicable State and Federal pretreatment laws, regulations, standards, or requirements that may become effective during the term of this permit.

## Part 2 – Monitoring Requirements

- A. From the period beginning on the Effective Date of the permit until 10-29-17, the permittee shall monitor outfall number 001 For the following parameters at the indicated frequency:

| <u>Parameter</u> | <u>Location</u> | <u>Frequency</u>   | <u>Sample Type</u> |
|------------------|-----------------|--------------------|--------------------|
| Copper           | Eff Discharge   | Once/Month & SMR's | Grab               |
| Cyanide          | Eff Discharge   | Once/Month & SMR's | Grab               |
| Lead             | Eff Discharge   | Once/Month & SMR's | Grab               |
| Nickel           | Eff Discharge   | Once/Month & SMR's | Grab               |
| Zinc             | Eff Discharge   | Once/Month & SMR's | Grab               |
| TSS              | Eff Discharge   | Once/Month & SMR's | Grab               |
| pH               | Eff Discharge   | Once/Month & SMR's | Grab               |

All parameters from pages 2a and 2b must be sampled, tested and reported in SMR's.

Sampling for SMR's must be done for four consecutive days in June and December. SMR Reports are due by the 15<sup>TH</sup> day of the following month. SMR's and Monthly Reports must contain dates, flows and signed Certification Statement.

B. All handling and preservation of collected samples and laboratory analyses of samples shall be performed in accordance with 40 CFR Part 136 and amendments thereto unless specified otherwise in the monitoring conditions of this permit.

### PART 3 - REPORTING REQUIREMENTS

#### A. Monitoring Reports

Monitoring reports obtained shall be summarized and reported on an Industrial User Monitoring Report Form once per month. The reports are due on the 15<sup>th</sup> day of the following month.

The first report is due on 11-15-2014.

The report shall indicate the nature and concentration of all pollutants in the effluent for which sampling and analyses were performed during the calendar month preceding the submission of each report including measured maximum and average daily flows.

B. If the permittee monitors any pollutant more frequently than required by this permit, using test procedures prescribed in 40 CFR Part 136 or amendments thereto, or otherwise approved by EPA or as specified in this permit, the results of such monitoring shall be included in any calculations of actual daily maximum or monthly average pollutant discharge and results shall be reported in the monthly report submitted to the City of Newburyport Wastewater Treatment Facility. Such increased monitoring frequency shall also be indicated in the monthly report.

Additional requirements for monthly reports:

#### C. Automatic Resampling

If the results of the permittee's wastewater analysis indicate that a violation of this permit has occurred, the permittee must:

1. Inform the City of Newburyport Wastewater Treatment Facility of the violation within 24 hours; and
2. Repeat the sampling and pollutant analysis and submit, in writing, the results of this second analysis within 30 days of the first violation.

#### D. Accidental Discharge Report

1. The permittee shall notify the City of Newburyport immediately upon the occurrence of an accidental discharge of substances prohibited by Section 14-73 of the Sewer Use Ordinance or any slug loads or spills that may enter the public sewer. During normal business hours the City of Newburyport Wastewater Treatment Facility should be notified by telephone @ (978)465-4461 or (978)465-4422. At all other times, the City of Newburyport Police Department should be notified by telephone @ (978)462-4411 after 4 p.m. Monday - Friday or weekends and holidays, so that they can notify (Page Sewer Dept. Call Crew). The notification shall include location of discharge, date and time thereof, type of waste, including concentration and volume, and corrective action taken.

The permittee's notification of accidental releases in accordance with this section does not relieve it of other reporting requirements that arise under Local, State, or Federal laws.

Within five days following an accidental discharge, the permittee shall submit to the City of Newburyport WasteWater Treatment Facility a detailed written report. The report shall specify:

a. Description and cause of the upset, slug load or accidental discharge, the cause thereof, and the impact on the permittee's compliance status. The description should also include location of discharge, type, concentration and the volume of waste.

b. Duration of noncompliance, including exact dates and times of noncompliance and, if the noncompliance is continuing, the time by which compliance is reasonably expected to occur.

c. All steps taken or to be taken to reduce, eliminate, and/or prevent recurrence of such an upset, slug load, accidental discharge, or other conditions of noncompliance.

E. All reports required by this permit shall be submitted to the City of Newburyport WasteWater Treatment Facility at the following address:

City of Newburyport WasteWater Treatment Facility  
Attn: Pretreatment Coordinator  
157 Water Street  
Newburyport, Ma. 01950

#### PART 4 - SPECIAL CONDITIONS

##### Section 1 - REOPENER CLAUSE

A. This permit may be reopened and modified to incorporate any new or revised requirements contained in a National Categorical Pretreatment Standard.

B. This permit may be reopened and modified to incorporate any new or revised requirements resulting from the City of Newburyport WasteWater Treatment Facility reevaluation of its Local Limits.

C. This permit may be reopened and modified to incorporate any new or revised requirements developed by the City of Newburyport WasteWater Treatment Facility as are necessary to ensure POTW compliance with applicable sludge management requirements promulgated by EPA (40 CFR Part 503).

##### Section 2 - COMPLIANCE SCHEDULE

A. The permittee shall accomplish the following tasks in the designated time period:

EVENT

NO LATER THAN

1. New WasteWater pretreatment plant  
Design completed \_\_\_\_\_
2. Equipment and materials ordered \_\_\_\_\_
3. Develop, and submit a copy to the  
City of Newburyport WasteWater Treatment  
Facility a slug loading control plan  
To eliminate or minimize the accidental  
Spill or slug discharge of pollutants  
Into the sewer system \_\_\_\_\_
4. Implement the slug loading control  
Plan \_\_\_\_\_
5. Complete installation of wastewater  
Pretreatment plant \_\_\_\_\_
6. Obtain full pretreatment plant operational  
Status and achieve full compliance \_\_\_\_\_

B. Compliance Schedule Reporting

No later than 14 days following each date in the above schedule, the permittee shall submit to the City of Newburyport WasteWater Treatment Facility a report including, at a minimum, whether or not it complied with the increment of progress to be met on such date and, if not, the date on which it expects to comply with the increment of progress, the reasons for delay, and the steps being taken to return the project to the schedule established.

PART 5 STANDARD CONDITIONS

Section A. General Conditions and Definitions

1. SEVERABILITY

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

2. DUTY TO COMPLY

The permittee shall take all reasonable steps to minimize or correct any adverse impact to the public treatment plant or the environment resulting from noncompliance with this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

### 3. DUTY TO MITIGATE

The permittee shall take all reasonable steps to minimize or correct any adverse impact to the public treatment plant or the environment resulting from noncompliance with this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

### 4. PERMIT MODIFICATION

This permit may be modified for good cause including, but not limited to, the following:

- a. To incorporate any new or revised Federal, State, or Local pretreatment standards or requirements;
- b. Material or substantial alterations or additions to the discharger's operation processes, or discharge volume or character which were not considered in drafting the effective permit;
- c. A change in any condition in either the industrial user or the POTW that requires either a temporary or permanent reduction or elimination of the authorized discharge;
- d. Information indicating that the permitted discharge poses a threat to the Control Authority's collection and treatment systems, POTW personnel or the receiving waters;
- e. Violation of any terms or conditions of the permit;
- f. Misrepresentation or failure to disclose fully all relevant facts in the permit application or in any required reporting;
- g. Revision of or a grant of variance from such categorical standards pursuant to 40 CFR 403.13;
- h. To correct typographical or other errors in the permit;
- i. To reflect transfer of the facility ownership and/or operation to a new owner/operator; and
- j. Upon request of the permittee, provided such request does not create a violation of any applicable requirements, standards, laws, or rules and regulations.

The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

### 5. PERMIT TERMINATION

This permit may be terminated for the following reasons:

- a. Falsifying self-monitoring reports
- b. Tampering with monitoring equipment
- c. Refusing to allow timely access to the facility premises and records
- d. Failure to meet effluent limitations
- e. Failure to pay fines
- f. Failure to pay sewer charges
- g. Failure to meet compliance schedules.

#### 6. PROPERTY RIGHTS

The issuance of this permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any violation of Federal, State, or Local laws or regulations.

#### 7. LIMITATION on PERMIT TRANSFER

Permits may be reassigned or transferred to a new owner and/or operator with prior approval of the Superintendent and/or Pretreatment Coordinator:

- a. The permittee must give at least (30) days advance notice to the Superintendent and/or Pretreatment Coordinator
- b. The notice must include a written certification by the new owner which:
  - (i) States that the new owner has no immediate intent to change the facility's operations and processes
  - (ii) Identifies the specific date on which the transfer is to occur
  - (iii) Acknowledges full responsibility for complying with the existing permit.

#### 8. DUTY TO REAPPLY

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must submit an application for a new permit at least 90 days before the expiration date of this permit.

#### 9. CONTINUATION OF EXPIRED PERMITS

An expired permit will continue to be effective and enforceable until the permit is reissued if:

a) The permittee has submitted a complete permit application at least ninety (90) days prior to the expiration date of the user's existing permit.

b) The failure to reissue the Permit, prior to expiration of the previous permit, is not due to any act or failure to act on the part of the permittee.

#### 10. CLASS AND/OR GROUP OF PERMITS:

The City of Newburyport WasteWater Treatment Facility has classified the non-residential users of the City Sewer System into the following

Classifications and/or Groups:

GROUP 1: MAJOR (Categorical) or SIGNIFICANT INDUSTRY

- Is subject to Categorical Standards.
- Discharges a non-domestic waste stream of 25,000 gal. Per day (0.025 MGD) or more.
- Contributes a non-domestic waste stream which makes up a 5 percent or more of the average dry weather hydraulic or organic (BOD, TSS, etc.) capacity of the Treatment Plant.
- Has a reasonable potential, in the opinion of the POTW Superintendent and/or Pretreatment Coordinator, to adversely affect the POTW Treatment Plant (inhibition, pass through of pollutants, sludge contamination, or endangerment of POTW workers).

These industries would be regulated individually and have specific effluent limits (including conventional pollutants, where necessary) placed on their discharges.

GROUP 2: MINOR PERMITTEES (Insignificant, non-categorical)

Defined as small industries and some commercial users (restaurants, auto repair shops, etc.) whose individual discharges do not significantly impact the Treatment system, degrade receiving water quality, or contaminate sludge. Industries that have the potential to discharge a non-domestic or process waste stream, but at the present time discharge only sanitary waste, may also be included in this group.

However, this group does not contain any Categorical industry. Industries in this grouping may be included in a general Permit system and occasionally monitored and inspected to determine if their status has changed. If waste streams from any of these Permittees or a group of these Permittees become a problem, the POTW may require a general Permit for all Permittees in that group or any wish to change their classification or grouping to a Significant and/or Major Permittee.

### GROUP 3: INSIGNIFICANT PERMITTEE

Defined as those that have been eliminated from further consideration.

These include industries that do not discharge to the POTW, or do not have any reasonable chance of discharging a non-domestic or waste stream to the POTW.

#### 11. ACCEPTANCE OF CONDITIONS:

The Permittee must abide by all provisions of the SEWER USE ORDINANCE adopted by the City of Newburyport and the Board of Sewer Commissioners. The applicant must conform to all applicable State and Federal regulations pertaining to the discharge of wastewaters, unless the Permittee has entered into an agreement with the City as stipulated in an attached Compliance Schedule. Where more than one regulatory limitation applies, the more stringent shall govern.

#### 12. DILUTION

The permittee shall not increase the use of potable or process water or, in any way, attempt to dilute an effluent as a partial or complete substitute for adequate treatment to achieve compliance with the limitations contained in this permit.

#### 13. DEFINITIONS

- a) Daily Maximum - The maximum allowable discharge of pollutant during a calendar day. Where daily maximum limitations are expressed in units of mass, the daily discharge is the total mass discharged over the course of the day. Where daily maximum limitations are expressed in terms of a concentration, the daily discharge is the arithmetic average measurement of the pollutant concentration derived from all measurements taken that day.
- b) Composite Sample - A sample that is collected over time, formed either by continuous sampling or by mixing discrete samples. The sample may be composited either as a TIME COMPOSITE SAMPLE: composed of discrete sample aliquots collected in one container at constant time intervals providing representative samples irrespective of stream flow; or as a FLOW PROPORTIONAL COMPOSITE SAMPLE: collected either as a constant sample volume at time intervals proportional to stream flow, or collected by increasing the volume of each aliquot as the flow increases while maintaining a constant time interval between the aliquots.
- c) Grab Sample - An individual sample collected in less than 15 minutes, without regard for flow or time.
- d) Instantaneous Maximum Concentration - The maximum concentration allowed in any single grab sample.
- e) Cooling Water -

(1) Uncontaminated: Water used for cooling purposes only which has no direct contact with any raw material, intermediate, or

final product and which does not contain a level of contaminants detectably higher than that of the intake water.

(2) Contaminated: Water used for cooling purposes only which may become contaminated either through the use of water treatment chemicals used for corrosion inhibitors or biocides, or by direct contact with process materials and/or wastewater.

f) Monthly Average - The arithmetic mean of the values for effluent samples collected during a calendar month or specified 30 day period (as opposed to a rolling 30 day window).

g) Weekly Average - The arithmetic mean of the values for effluent samples collected over a period of seven consecutive days.

h) Bi-Weekly - Once every other week.

i) Bi-Monthly - Once every other month.

j) Upset - Means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee, excluding such factors as operational error, improperly designed or inadequate treatment facilities, or improper operation and maintenance or lack thereof.

k) Bypass - Means the intentional diversion of wastes from any portion of a treatment facility.

#### 14. GENERAL PROHIBITIVE STANDARDS

The permittee shall comply with all the general prohibitive discharge standards in Section 14-73 of the Sewer Ordinance. Namely, the industrial user shall not discharge wastewater to the sewer system:

a) Having a temperature higher than 104 degrees F (40 degrees C);

b) Containing more than 100 ppm by weight of fats, oils, and grease;

c) Containing any gasoline, benzene, naphtha, fuel oil or other flammable or explosive liquids, solids or gases; and in no case pollutants with a closed cup flashpoint of less than one hundred and forty (140) degrees Fahrenheit (60 degrees C), or pollutants which cause an exceedence of 10 percent of the LOWER EXPLOSIVE LIMIT (LEL) at any point within the POTW;

d) Containing any garbage that has not been ground by household type or other suitable garbage grinders;

e) Containing any ashes, cinders, sand, mud, straw, shavings, metal, glass, rags, feathers, tar, plastics, wood, paunch, manure, or any other solids or viscous substances capable of causing obstructions or other interference with proper operation of the sewer system;

- f) Having a pH lower than 6.0 or higher than 11.0, or having any other corrosive property capable of causing damage or hazard to structures, equipment or personnel of the sewer system;
- g) Containing toxic or poisonous substances in sufficient quantity to injure or interfere with any wastewater treatment process, to constitute hazards to humans or animals, or to create any hazard in waters which receive treated effluent from the sewer system treatment plant. Toxic wastes shall include, but are not limited to wastes containing cyanide, chromium, cadmium, mercury, copper, and nickel ions;
- h) Containing noxious or malodorous gases or substances capable of creating a public nuisance; including pollutants which result in the presence of toxic gases, vapors, or fumes;
- i) Containing solids of such character and quantity that special and unusual attention is required for their handling;
- j) Containing any substance which may affect the Treatment Plant's effluent and cause violation of the NPDES permit requirements;
- k) Containing any substance which would cause the Treatment Plant to be in noncompliance with sludge use, recycle or disposal criteria pursuant to guidelines or regulations developed under Section 405 of the Federal Act, the Solid Waste Disposal Act, the Clean Air Act, the Toxic Substance Control Act or other regulations or criteria for sludge management and disposal as required by the State;
- l) Containing color which is not removed in the treatment processes;
- m) Containing any medical or infectious wastes;
- n) Containing any radioactive wastes or isotopes; or
- o) Containing any pollutant, including BOD pollutants, released at a flow rate and/or pollutant concentration which would cause interference with the Treatment Plant.

#### 15. COMPLIANCE WITH APPLICABLE PRETREATMENT STANDARDS AND REQUIREMENTS

Compliance with this permit does not relieve the permittee from its obligations regarding compliance with any and all applicable Local, State, and Federal pretreatment standards and requirements including any such standards or requirements that may become effective during the term of this permit.

#### SECTION B. OPERATION AND MAINTENANCE OF POLLUTION CONTROLS

##### 1. Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all

facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes but is not limited to: effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.

## 2. Duty to Halt or Reduce Activity

Upon reduction of efficiency of operation, or loss, or failure of all or part of the treatment facility, the permittee shall, to the extent necessary to maintain compliance with its permit, control its production or discharges (or both) until operation of the treatment facility is restored or an alternative method of treatment is provided.

This requirement applies, for example, when the primary source of power of the treatment facility fails or is reduced. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

## 3. Bypass of Treatment Facilities

a) Bypass is prohibited unless it is unavoidable to prevent loss of life, personal injury, or severe property damage or no feasible alternatives exist.

b) The permittee may allow bypass to occur which does not cause effluent limitations to be exceeded, but only if it is also for essential maintenance to assure efficient operation.

### c) Notification of Bypass:

(1) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior written notice, at least ten days before the date of the bypass, to the attention of the Superintendent and/or the Pretreatment Coordinator of the Newburyport Wastewater Treatment Facility.

(2) Unanticipated bypass. The permittee shall immediately notify the Superintendent and/or the Pretreatment Coordinator and submit a written notice to the POTW within 5 days. This report shall specify:

(i) A description of the bypass, and its cause, including its duration;

(ii) Whether the bypass has been corrected; and

(iii) The steps being taken or to be taken to reduce, eliminate and prevent a reoccurrence of the bypass.

## 4. REMOVED SUBSTANCES

Solids, sludge's, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in accordance with Section 405 of the Clean Water Act and Subtitles C and D of the Resource Conservation and Recovery Act.

## SECTION C. MONITORING AND RECORDS

### 1. REPRESENTATIVE SAMPLING

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring points specified in this permit and, unless otherwise specified, before the effluent joins or is diluted by any other waste stream, body of water or substance. All equipment used for sampling and analysis must be routinely calibrated, inspected and maintained to ensure their accuracy. Monitoring points shall not be changed without notification to and the approval of the Superintendent and/or Pretreatment Coordinator, City of Newburyport Wastewater Treatment Facility.

### 2. FLOW MEASUREMENTS

If flow measurement is required by this permit, the appropriate flow measurement devices and methods consistent with approved scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated, and maintained to ensure that the accuracy of the measurements are consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than 10 percent from true discharge rates throughout the range of expected discharge volumes.

### 3. ANALYTICAL METHODS to DEMONSTRATE CONTINUED COMPLIANCE

All sampling and analysis required by this permit shall be performed in accordance with the techniques prescribed in 40 CFR Part 136 and amendments thereto, otherwise approved by EPA, or as specified in this permit.

### 4. ADDITIONAL MONITORING by the PERMITTEE

If the permittee monitors any pollutant more frequently than required by this permit, using test procedures identified in Section C. 3, the results of this monitoring shall be included in the permittee's self-monitoring reports.

### 5. INSPECTION and ENTRY

The permittee shall allow the City of Newburyport Superintendent and/or the Pretreatment Coordinator, or an authorized representative of the POTW, upon the presentation of credentials and other documents as may be required by law, to:

- a) Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
- b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;
- c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit;
- d) Sample or monitor, for the purposes of assuring permit compliance, any substances or parameters at any location; and
- e) Inspect any production, manufacturing, fabricating, or storage area where pollutants, regulated under the permit, could originate, be stored, or be discharged to the sewer system.

#### 6. RETENTION OF RECORDS

- a) The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, for a period of at least three years from the date of the sample, measurement, report or application

This period may be extended by request of the Superintendent and/or Pretreatment Coordinator at any time.

- b) All records that pertain to matters that are the subject of special orders or any other enforcement or litigation activities brought by the City of Newburyport Wastewater Treatment Facility shall be retained and preserved by the permittee until all enforcement activities have concluded and all periods of limitation with respect to any and all appeals have expired.

#### 7. RECORD CONTENTS

Records of sampling and analysis shall include:

- a) The date, exact place, time, and methods of sampling or measurements, and sample preservation techniques or procedures;
- b) Who performed the sampling or measurements;
- c) The date(s) analyses were performed;
- d) Who performed the analyses;
- e) The analytical techniques or methods used; and
- f) The results of such analyses.

#### 8. FALSIFYING INFORMATION

Knowingly making any false statement on any report or other document required by this permit or knowingly rendering any monitoring device or method inaccurate, is a crime and may result in the imposition of criminal sanctions and/or civil penalties.

#### SECTION D. ADDITIONAL REPORTING REQUIREMENTS

##### 1. PLANNED CHANGES

The permittee shall give notice to the Superintendent and/or the Pretreatment Coordinator 90 days prior to any facility expansion, production increase, or process modifications which result in new or substantially increased discharges or a change in the nature of the discharge.

##### 2. ANTICIPATED NONCOMPLIANCE

The permittee shall give advanced notice to the Superintendent and/or the Pretreatment Coordinator of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

##### 3. AUTOMATIC RESAMPLING

If the results of the permittee's wastewater analysis indicates a violation has occurred, the permittee must notify the Superintendent and/or the Pretreatment Coordinator within 24 hours of becoming aware of the violation and repeat the sampling and pollutant analysis and submit, in writing, the results of this repeat analysis within 30 days after becoming aware of the violation.

##### 4. DUTY to PROVIDE INFORMATION

The permittee shall furnish to the POTW Superintendent and/or Pretreatment Coordinator, within reasonable time any information which the POTW Superintendent and/or Pretreatment Coordinator may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also, upon request, furnish to the POTW Superintendent and/or Pretreatment Coordinator within reasonable time Copies of any records required to be kept by this permit.

##### 5. SIGNATORY REQUIREMENTS

All applications, reports, or information submitted to the POTW Superintendent and/or Pretreatment Coordinator must contain the following certification statement and be signed as required in Sections (a), (b), (c), or (d) below:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and

evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

a) By a responsible corporate officer, if the Industrial User submitting the reports is a corporation. For the purpose of this paragraph, a responsible corporate officer means:

(i) A president, secretary, treasurer, or vice-president of the corporation in charge of the principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or;

(ii) the manager of one or more manufacturing, production, or operation facilities employing more than 250 persons or having gross annual sales or expenditures exceeding \$25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

b) By a general partner or proprietor if the Industrial User submitting the reports is a partnership or sole proprietorship respectively.

c) The principal executive officer or director having responsibility for the overall operation of the discharging facility if the Industrial User submitting the reports is a Federal, State, or Local governmental entity, or their agents.

d) By a duly authorized representative of the individual designated in paragraph (a), (b), or (c) of this section if:

(i) The authorization is made in writing by the individual described in paragraph (a), (b), or (c);

(ii) the authorization specifies either an individual or a position having responsibility for the overall operation of the facility from which the Industrial Discharge originates, such as the position of plant manager, operator of a well, or a well field superintendent, or a position of equivalent responsibility, or having overall responsibility for environmental matters for the company; and

(iii) The written authorization is submitted to the City.

e) If an authorization under paragraph (d) of this section is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, or overall responsibility for the environmental matters for the company, a new authorization satisfying the requirements of paragraph (d) of this section must be submitted to the City prior to or together with any reports to be signed by an authorized representative.

## 6. OPERATING UPSETS

Any permittee that experience an upset in operations that places the permittee in a temporary state of noncompliance with the provisions of either this permit or with Section 14-73, 14-74 of the Sewer Use Ordinance shall inform the POTW Superintendent and/or Pretreatment Coordinator within 24 hours of becoming aware of the upset. During normal business hours at the Newburyport WasteWater Treatment Facility call (978)465-4461 or (978)465-4422. At all other times, the City of Newburyport Police Department should be notified by Telephone @ (978)462-4411 after 4 p.m. Monday-Friday or weekends and holidays, so that they can notify ( page Sewer Dept. Call Crew ).

A written follow-up report of the upset shall be filed by the permittee with the POTW Superintendent and/or Pretreatment Coordinator within 5 days. The report shall specify:

- a) Description of the upset, the cause(s) thereof and the upset's impact on the permittee's compliance status;
- B) Duration of noncompliance, including exact dates and times of noncompliance, and if not corrected, the anticipated time the noncompliance is expected to continue; and
- c) All steps taken or to be taken to reduce, eliminate and prevent recurrence of such an upset.

The report must also demonstrate that the treatment facility was being operated in a prudent and workmanlike manner.

A documented and verified operating upset shall be an affirmative defense to any enforcement action brought against the permittee for violations attributable to the upset event.

## 7. ANNUAL PUBLICATION

A list of all industrial users which were subject to enforcement proceedings during the twelve (12) previous months shall be annually published by the City of Newburyport WasteWater Treatment Facility in the largest daily newspaper within its service area. Accordingly, the permittee is apprised that noncompliance with this permit may lead to an enforcement action and may result in publication of its name in an appropriate newspaper in accordance with this section.

## 8. CIVIL and CRIMINAL LIABILITY

Nothing in this permit shall be construed to relieve the permittee from civil and/or criminal penalties for noncompliance under Section 14-33 of the Sewer Use Ordinance or State or Federal laws or regulations.

## 9. PENALTIES for VIOLATIONS of PERMIT CONDITIONS

Section 14-33 of the Sewer Use Ordinance provides that any person who violates a permit condition is subject to a civil penalty of at least

\$1000.00 per day per violation. Any person who willfully or negligently violates permit conditions is subject to criminal penalties of a fine of up to \$5000.00 per day per violation, or by imprisonment or both. The permittee may also be subject to sanctions under State and/or Federal law.

#### 10. RECOVERY of COSTS INCURRED

In addition to civil and criminal liability, the permittee violating any of the provisions of this permit or causing damage to or otherwise inhibiting the Newburyport WasteWater Treatment Facility and/or Sewer system shall be liable to the Newburyport WasteWater Treatment Facility for any expense, loss, or damage caused by such violation or discharge.

The City of Newburyport WasteWater Treatment Facility shall bill the permittee for the cost incurred by the City of Newburyport WasteWater Treatment Facility for any cleaning, repair, or replacement work caused by the violation or discharge. Refusal to pay the assessed costs shall constitute a separate violation of Section 14-33, (b), (c), and (d) of the Sewer Use Ordinance.

